

Understanding the current competitiveness challenges of the London financial cluster

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Bachelor's thesis

May 2020

School of Business

Degree Programme in International Business

Author(s) Jolkkonen, Kasimir	Type of publication Bachelor's thesis	Date May 2020 Language of publication: English
	Number of pages 74	Permission for web publication: Yes
Title of publication Understanding the current competitiveness challenges of the London financial cluster		
Degree programme International Business		
Supervisor(s) Akpinar, Murat		
Assigned by JAMK Centre for Competitiveness		
Abstract <p>Since the era of the British empire, London has been one of the dominant economic centres in the world. In recent years, however, London has become a middleman amid political change, with Brexit at the forefront. Digitalisation has also laid the foundations for the new opportunities and challenges that the London financial cluster is now facing. The aim of the study was to understand what challenges the London economic cluster is currently facing, as well as what actions can be taken to overcome them.</p> <p>A qualitative research method was chosen, utilizing both primary data and secondary data. Primary data were collected through semi-structured interviews conducted with two financial professionals. Secondary data were collected from reliable sources such as the City of London, the Bank of England and the Global Financial Centre index. Porter's Diamond model was chosen as the theoretical framework to guide the general direction of the study.</p> <p>Including digitalisation and globalization, research findings showed that Brexit has the broadest impact on cluster competitiveness. The study found that withdrawal from the European Union has a strong impact on various aspects of the Porter's model, which ultimately contradicts the basic idea of the model, where the government has only a supportive effect on competitiveness. The importance of cooperation between countries, clusters and universities was emphasized in research and keeping pace with technological development is a critical feature in overcoming challenges.</p> <p>As a practical implication, emphasis was placed on maintaining a talented workforce in the cluster area, increasing co-operation between Fintech clusters within the country, and establishing branch offices in various financial clusters in the European Union. The limitation of the study included the lack of primary data from the cluster as well as Brexit's ongoing negotiations.</p>		
Keywords/tags (subjects) Competitiveness of a cluster, London financial cluster, Effects of Brexit on competitiveness		
Miscellaneous (Confidential information)		

Tekijä(t) Jolkkonen, Kasimir	Julkaisun laji Opinnäytetyö, AMK	Päivämäärä Toukokuu 2020
	Sivumäärä 74	Julkaisun kieli Englanti
		Verkojulkaisulupa myönnetty: Kyllä
Työn nimi Lontoon talousklusterin nykyisten kilpailukykyhaasteiden ymmärtäminen		
Tutkinto-ohjelma International Business		
Työn ohjaaja(t) Murat Akpınar		
Toimeksiantaja(t) JAMK Center for Competitiveness		
Tiivistelmä <p>Britannian imperiumin aikakaudesta lähtien Lontoo on ollut yksi hallitsevimista taloudellisista keskittymistä maailmassa. Viime vuosina Brexitin myötä Lontoosta on kuitenkin tullut poliittisen muutoksen uhri. Digitalisaatio on myös luonut perustan uusille mahdollisuuksille ja haasteille, joita Lontoon talousklusteri nyt kohtaa.</p> <p>Tutkimuksen tavoitteena oli ymmärtää Lontoon talousklusterin nykyiset haasteet sekä niiden ratkaisemiseen tarvittavat toimenpiteet.</p> <p>Tutkimukseen valittiin laadullinen tutkimusmenetelmä, joka hyödyntää sekä ensisijaisia että toissijaisia lähteitä. Tutkimusdata kerättiin haastatteluina suomalaisilta finanssialan ammattilaisilta. Dokumentaariset tiedot kerättiin luotettavista lähteistä, kuten City of London, Bank of England ja Global Financial Center -indeksistä. Porterin timanttimali valittiin teoreettiseksi viitekehyykseksi ohjaamaan tutkimuksen yleistä suuntaa.</p> <p>Digitalisaatio ja globalisaatio huomioiden tutkimustulokset osoittivat Brexitin vaikuttavan laajimmin klusterin kilpailukykyyn. Tutkimuksessa huomattiin Euroopan Unionista eroamisella olevan vaikutusta useisiin Porterin mallin eri osa-alueisiin, mikä kuitenkin on ristiriidassa mallin perusajatuksen kanssa, jossa hallituksella on vain tukeva vaikutus alueen kilpailukykyyn. Maiden ja klustereiden välisen yhteistyön merkitys korostui tutkimuksessa. Teknologian kehityksen tahdissa pysyminen on kriittinen ominaisuus haasteiden kuomomisessa.</p> <p>Käytännön seuraamukseksi korostettiin lahjakkaan työvoiman ylläpitoa klusterin alueella, Fintech-klusterien yhteistyön lisäämistä maan sisällä sekä haarakonttoreiden perustamista Euroopan unionin eri talousklustereihin. Tutkimuksen rajoituksiin kuuluivat klusterista saatavien haastatteluiden puute sekä Brexitin yhä käynnissä olevat neuvottelut.</p>		
Avainsanat (asiasanat) Klusterin kilpailukyky, Lontoon talousklusteri, Brexitin vaikutukset kilpailukykyyn		
Muut tiedot		

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1 Introduction

1.1 Background

Currently London financial institutions are under constant attention as new challenges are appearing from politics, multinational companies and increasing competition. Following increasing focus in globalisation and competitiveness, emphasis has been shifting from the singular company competitiveness to regional and national competitiveness (Berger 2008, 92). The reason for competitive success of industries have been studied extensively and multiple opposite views have been introduced. At the beginning, competition was seen as intelligent financial planning but as Porter (2000, 19) argued, real competition is based on the ability to differ strategy and to create innovations. National and industrial competitiveness are seen as interconnected, as the innovative development of companies are constantly affecting to national level of competitiveness as well. Thus, poorly developed companies have negative effect on the level of national competitiveness. (ibid., 19.) The discussion of the competitiveness has been strongly debated, however, the reasons for competitive advantages has been studied from multiple point of views. Competitiveness can be seen between clusters as well. Clusters are agglomerations of businesses and therefore, independent firm's competitiveness affect to the cluster's competitiveness. This phenomenon is apparent in national and industrial competitiveness as well. (Porter 2000, 19.) Porter (2000, 19) argues that competitiveness also stems from external factors instead of just cluster's individual firms. External factors are considered to be more comprehensive than the efforts of individual companies but as well, the spill overs from different collaborations and related and associated industries (Fernando & Long 2012, 76). Clustering can therefore offer benefits outside firms' normal operating range such as harness the benefits from all value-adding companies and organisations in the area. Governments can also gain broader understanding of the industry by studying business agglomerations, clusters, rather than a large number of individual firms. (Lines & Monypenny 2006, 2-5.) Clusters are also seen in London financial district and London financial cluster has been considered to be the capital of finance for a long period of time (Sassen 1999). The cluster is however currently facing significant

financial difficulties and uncertainties as the financial companies are transferring their services abroad (Chapman 2019). New strategies and contingency plans need to be considered to increase the ability to succeed in an environment of escalated competition.

London is the capital city of England and the United Kingdom with the approximate population of 8,9 million people as of 2019 (London population 2020). The population of United Kingdom is 67,725,292 as of 2020, making London almost 13% of the country's entire population (U.K. Population 2020). This population of London is concerning the Greater London, which consists the area of different London boroughs. Greater London is an area of 1,569 square kilometres. (London population 2020.) London is accounting approximately half of the financial services in the entire United Kingdom making financial services one of the largest and most important industries in the city and country (City of London jobs 2019). Competitiveness is an important part of the financial market and reports on the strength of the financial cluster are published multiple times a year. According to Sassen (1999), London has the ability to gain competitiveness as a financial cluster because of its global operations. The largest rival, New York, is mainly focusing on the domestic market due to its large market size. After the continuous growth of London financial market in the recent decades, new companies around the world have been transferring their services to London, strengthening London's position as the capital of capital. The internationalisation of the cluster has played an important role in enabling the continuous growth of the financial district. (ibid.) As Chan-lau et al. (2007) explained, largest part of the assets in the United Kingdom banking sector comes from abroad. This makes London a link to international funding as they are within its reach (ibid.) However in the recent years, competitiveness of London financial district has faced threats as political issues are affecting the country, most of all Brexit. Questions have risen as financial organisations are considering whether to keep some of the finances in the city or to make a complete relocation of assets to other European Union countries or to United States (Makortoff 2018). In this study the challenges of the London financial cluster were studied to understand possible harmful factors concerning the cluster.

1.2 Motivation

London has been an area of interest for many investors and multinational financial companies because of the opportunities it offers. In recent years nonetheless, there has been questions about its ability to maintain the position as world's financial capital. According to Tsang and Goldstein (2019), American banks have been transferring employees and funds back to United States and to Dublin. London based banking firms have been doing the same across the European Union (ibid.). Diversity of the target cities where the financial services are being moved is high, as companies try to avoid being in the centre of another "all eggs in one basket" situation in the future. Issues effecting financial companies in the area are generally considered to be evident with or without the exit from European Union, as both of these scenarios have setbacks to the economy. There is also a rising concern over the fact that businesses from European Union are influenced by new costs. These costs include working visas for the employees located in United Kingdom which is considered to decrease attractiveness of the country (Hilton 2018). Inman (2019) suggests that almost a third of the companies working currently in UK, intend to transfer their operations out of the country because of the instability that controls the area currently. Overall, hundreds of billions of pounds have been transferred from the city by many different multinational companies to ensure their safety from risk factors. These assets have been relocated in the different financial areas in European Union which may endanger and diminish the competitiveness of London financial cluster. (Eichengreen 2019.) These uncertainties have implications to related and associated industries as relocation plans are under consideration around the cluster.

There has already been established in this research that financial institutions in London financial cluster are not merely British institutions, but a large part of them are international. Therefore, challenges facing London financial district creates also international impacts. The author conducted this study to provide knowledge about financial challenges which can benefit individuals and institutions to gain better understanding of issues at hand. Understanding current volatile transfers of capital, employment changes, increase or lost in competitiveness offers holistic understanding of the current state of the industry. Considering the possible changes

in competitiveness in the area has an effect on companies' success, as competitiveness and productivity are often considered to be interconnected.

Global perspective to business has always been interesting to me. I have been studying different business phenomena for years on my own by reading different literature and news from multiple sources. After a summer of 2019 working in a banking industry for the first time in my career, I gained deeper understanding about financial systems. Even though I had an opportunity to work in the industry, I wanted to go deeper in the subject and gain more holistic understanding of it. Economics and finances are extensive sciences and gaining a complete understanding of them may be impossible. However, I decided to dig deeper in a single topic by combining my personal interests and financial state of the world. I wanted to choose London as the subject of investigation as its current state has been under speculation for a few years and it has been one of the largest financial concentrations in the world for decades. Throughout my track studies in university, I learned about clusters. Studying this phenomenon helped me understand certain business-related concentrations such as Silicon Valley and the flower cluster in the Netherlands. Understanding these variables and concepts that are constantly affecting the business world, helped me deepen my knowledge in the other fields of business as well. In the track course I also first realised that the clustering is one the reasons behind longitudinal success of the London financial district or better known as City of London. After gaining more understanding of financial world and clustering, I started to question the reason behind London's ability to have a long-term success. Additionally, as the previous studies were focused on the existing dominance of the cluster, I started questioning the challenges affecting it.

By conducting this study, I will enrich my knowledge of the financial world, global competitiveness, clusters and as well my academic writing and data analysis skills. I believe to gain better competence in this field after this study and to gain more knowledge of the world of international business.

1.1 Research problem, question, approach and structure

Research problem and objective

As the leading financial cluster of European Union and the world, London has faced new issues concerning volatility in investing, financial institutions and related and associated institutions. Several changes are coming for the organisations to cope with the uncertainty. International companies have acknowledged other financial centres in the Europe, increasing the competition between London and other EU based financial clusters. London has been still described as major competitor in terms of population and liquidity, that is not available at the same level in the rest of Europe (Steinberg et al. 2019). However, question rises whether the main goal is to create a singular extensive hub of finance, or instead apply diversification to the industry. As London financial cluster has proved its ability to lead the financial world for a long period of time, the aim of the research is to understand what the current challenges are affecting the cluster and what might be harming its future.

Research question and approach:

The following research questions were formed to focus the study. This research is aimed to answer these two questions.

- “What are the current competitiveness challenges of the London financial cluster?”
- “How can London financial cluster overcome these challenges?”

The reasearch will be a qualitative study by nature and will be conducted with studying relevant secondary data and by conducting semi-structured interviews. Qualitative study is well suited for the research as it provides comprehensive perspective to the reasearch problem without limiting its flexibility (Baxter & Jack 2008). To achieve relevance and validity, interviews are being conducted to gather recent information from the industry professionals.

Diamond model from Porter, was chosen for the theoretical framework. By applying theoretical framework to the reasearch, it is easier to concentrate the analysis on certain factors. Diamond model analyses from four perspectives that helps to simplify even a large number of data by categorizing the information. Diamond model categories additionally offer a simple way for the reader to understand the challenges from different perspectives.

Structure of the thesis

In the second chapter, the author implements critical analysis of relevant literature concerning the main topics of the thesis. These topics include competitiveness and different points of views to it, clusters and clustering, two potential frameworks and the actual theoretical framework. Chapter three “methodology” explains the specific research approach used in this study and how the data is collected and analysed. After conducting research from secondary and primary data, chapter four “results” then describes the findings from the research. Results chapter tries to answer to the research question of the thesis. Chapter five ends the thesis with discussion, where information found in chapter four are being discussed and reflected to the future. In the final chapter there is also summary of the results and assessment of the results in the light of literature.

2 Literature Review

2.1 Clusters

To understand the topic, it is necessary to understand a few key concepts and cluster, or clustering is one of them. Business clusters are well-known concept around the world, and they are evident in almost every existing industry. According to Porter (2016), clusters are agglomeration of interconnected suppliers, companies and firms from related- and associated industries and institutions. Clusters also include service providers and the players inside the cluster which compete and cooperate to create competitiveness to the cluster (ibid.). Clusters and clustering have been identified as an ideology to modify the company’s mindset from more rigid and narrow perspective to more holistic and cooperative point of view (Lundequist & Power 2002). As clusters create a sense of cooperativeness between interconnected companies, economies of scale are inevitable (Nallari et al. 2013, 108). The cluster as a phenomenon provides an understanding that relatively big part of a firm’s competitiveness does not appear inside the company but instead, outside (Porter 2000). For example, the possibility of succeeding in automobile industry may be easier in Germany compared to other countries because of the location and the existing automobile cluster located in Germany (Porter 2000). This is based on the

idea that if clusters are cooperating, they are able to increase their overall competitiveness and economies of scale as well as stand out from the rest of the companies.

Clusters have also become a source of competitiveness as it has been stated that agglomeration of businesses attract new companies to the area. Therefore, new companies arriving have a beneficial effect to the cluster by strengthening its position. By their very nature, agglomerations attract new businesses. (Kuah 2002, 210.) As new businesses benefit from collaboration between larger companies, larger companies can also benefit from the small ones. According to Kuah (2002, 210), clusters can provide a good place for innovations and smaller companies tend to be interested in these opportunities. By offering small companies a platform for innovations, other companies inside the same cluster can benefit from the innovations in a form of increased productivity. Benefits of the clustering has been studied extensively throughout the years, as the focus has been shifted from the national clustering to industrial clustering (Lines & Monypenny 2007, 4). Clustering benefits and strengths include cluster companies access to information and technology that ultimately provides outsourcing possibilities for the businesses. These qualities has been connected to increase in productivity, innovation and vertical integration among the companies (ibid.) According to Lines and Monypenny (2007, 5), clustering will enable better flow of information and knowledge as it will act as an incentive for the companies to produce innovations from which possibly other companies can also benefit from. When considering overall benefits for all the firms in a cluster, as the pressure on human capital keeps increasing, there are also cluster provided benefits for it. If the cluster begins to extensively grow and develop, job applicants will notice the possibilities of the area (ibid.). This will increase the number of talented applicants in the area and talented labour force in the companies.

All of these factors have a direct connection to the influence of the cluster. Influence of the cluster describes the power of the business agglomeration and how important is a particular cluster for the industry (Rosenfeld 1997, 10). When considering the power of a cluster, we can follow the outcomes of what were considered as the benefits of one. Research and development or better known as R&D, creates an

important factor for the clusters power. R&D plays a large role in innovations and productivity and therefore a good research and development inside the cluster has a positive impact on competitiveness. Knowledge, skills and the human resource development define a successful cluster. Expertise in the industry and skills regarding to specific field, are the building blocks of many successful clusters around the world, including Silicon Valley. Proactive development of these factors enables constant development in the area. Logistical proximity of suppliers as well as related and supporting industries and institutions are vital for clustering. When cluster is closely formed, the efficiency is achieved. (ibid.) Connection between the companies and supporting and related industries has opened a new flow of information and a new way of doing business (Porter 1998, 89). When the focus has been shifted from narrow perspective of individual businesses to more broader clusters, the topic of the discussion has become more holistic. This shift has enabled the executives of the companies to address the problems in a different manner. Nowadays as the origin of competitiveness has been determined by this transformation, right questions can be asked from the government to support the businesses (ibid.)

Cluster is not considered to be separate from the rest of the business world, although they may at first seem as separate concentrations of businesses. Instead, they should be seen more as a product of increased competitiveness and globalization. As Porter (1998, 80) discusses in his study, new businesses are not necessarily established to operate alone anymore, but instead inside the cluster. The competitive cluster has an ability to attract new companies to be created inside, to support and/or benefit the cluster. It is considered to be more efficient for new company to either enter the cluster or to be created inside the cluster, instead of operating alone. Cluster enables flexibility for new businesses even when working inside it as the company can still operate alone without formal merger contract (ibid.)

2.2 Competitiveness

Competition and furthermore competitiveness are topics that have been seen both as a negative concept and as a positive concept but altogether as complex topics. What makes these such a complex and overwhelming topic is the large amount of secondary data written about them and the many different point of views. Krugman (1994) described the competitiveness being both a mindless and dangerous word to be used because of the power it may have inside a country. For example, to increase the competitive advantage, a country can feel pressure to support an industry without the industry having an actual need for it, causing misallocation of resources (ibid.). Competitiveness, however, as a term can be multiform as it can be related to the standard of living, growth or, for example, prosperity (Delgado et al. 2012, 2). Martin et al. (2006, 3) explains that productivity can be a synonym for competitiveness and that the term competitiveness creates confusion over the more simpler term productivity. Productivity, according to Martin et al. (2006, 3) means an increase in the standard of living.

National competitiveness has become increasingly important which creates an understanding that not only companies can or need to be competitive but nations and regions as well. As this study analysed the competitiveness of a region and a cluster, it is important to be mindful of the complexity of regional competitiveness and how vital it is for the success of a certain area or cluster. Porter (2008, 171) describes that competitiveness can stem from individuals as well. Knowledge has become an increasingly important factor in today's job markets, and this is transferring the observation from companies to entire countries (Porter 2008, 171). Countries' advantages, however, rely on the natural resources and culture that the country has to offer. These factors cannot be reproduced by other regions, but as well, one region cannot be the most competitive in all fields (ibid.). As Abraham (1994, 30) explained in his study, even though global trade has become larger than ever, domestic factors create the most significant part of countries' standard of living. When focusing on domestic trade, Krugman (1994, 32) stated that countries focusing more on domestic market than global markets are examples of defining competitiveness as productivity. Countries, however, focusing on the export trade more than import trade, prefer the term competitiveness, instead of productivity.

(ibid.) Krugman (1994, 33) therefore suggests that competitiveness is a reference to international competition and trade. Ketels' (2016) analysis on the other hand explains that competitiveness differs between singular companies and geographical areas, such as countries. Companies has an ability to affect others in their competition, for example in the case of rivals. When Coca Cola has an increase in sales, Pepsi may be suffering from the lack of demand towards their products (Krugman 1994, 34). However, when considering country's success, we notice that the increase or decrease in competitiveness has the largest effect on the citizens, instead of other countries (ibid.). Countries do not act the same way as companies (Ketels 2016, 7). Companies are considered to have a lifeline and they are prone to go out of business because of difficult economic situations for example. Going out of business does not happen to locations as locations are able to adjust to changes by changing their prosperity levels and prices while companies lose the ability for production. (ibid.). Ketels (2016, 7) argues that in the case of companies, other companies' gain is directly related to others loss. This suggests that companies' way of playing the zero-sum game differs from locations competitiveness as locations can benefit from the increased competitiveness of other regions (ibid., 7) Once a location is able to increase its competitiveness, productivity increase and certain spill overs are positively affecting neighbouring locations (ibid., 9). Krugman (1994, 35) reminds that countries, by their increase in competitiveness', does not decrease other country's standards of living. However, it can have a negative effect in the other country's status and political power in a global scale (ibid.).

When considering regional competitiveness, it has been argued that attracting and maintaining companies while having increased or stable market shares is the measurement of competitiveness in a regional perspective (Maskel & Malmberg 1995). Kitson et al. (2004, 994) found the same principles in their study as Maskel and Malmberg (1995) did, that the ability to retain stability and increase it will be considered as competitiveness.

2.2.1 Global Competitiveness index

Since 1979, competitiveness has been analysed through different global competitiveness reports (Sala-I-Martin et al. 2008, 3). These reports have been used to benchmark competitiveness and thus help leaders to find possible problem areas and to find solutions for them (ibid.). After its creation in 2004, Global Competitive Index (GCI) has been annually published in World economic forum to provide information of national competitiveness in microeconomic and macroeconomic scale (Porter et al. 2008, 43; Sala-I-Martin et al. 2008, 3).

GCI defines nations competitiveness through 12 described pillars (Figure 1) that can be altered throughout the years to match the current technology and development (Schwab 2019, 2). Schwab (2019, 2) emphasizes that between the nations there are not a zero-sum game but instead the analysis shows that every nation can increase their ranking each year, without decreasing others.

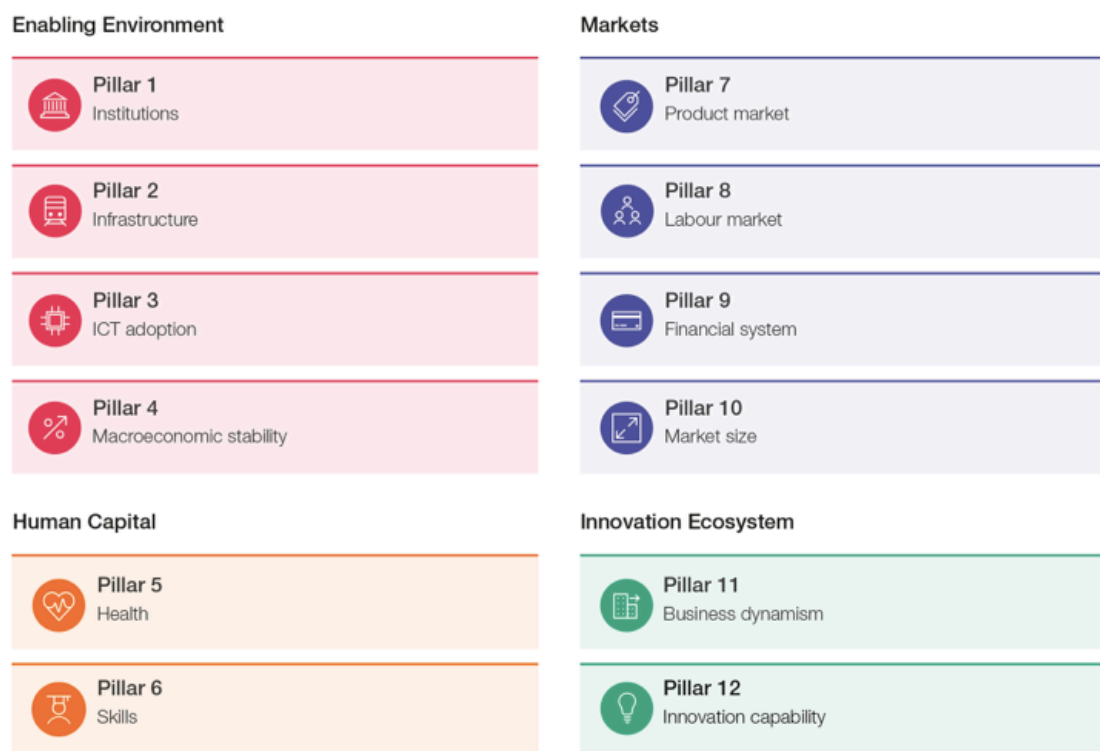


Figure 1 “12” pillars of Global Competitiveness index (Schwab 2019)

First pillar defines the level of institutions in a nation by analysing development, strategies, policies, sharing of benefits and dealing with costs (Sala-I-Martin 2008, 4).

Institutions play a large role in nations growth and consists also from governmental institutions. Schwab and Porter (2009, 4) outlines the importance of private sector as for example, reliable accounting has becoming increasingly important in the world of financial scandals. Efficiently working institutions help the nation to work without excessive use of red tape or too strict bureaucracy. (Sala-I-Martin 2008, 4)

Second pillar outline infrastructure, hence the ability to make business inside a country. By poor infrastructure, distant locations and customers cannot be reached. Efficiently built infrastructure creates opportunities for extensive customer and logistical networks that increases productivity. (ibid.) Well constructed infrastructure can have positive change in equality by connecting people to schools and activities even from the remote areas (Schwab & Porter 2009, 4).

Third pillar describes ICT adoption by interpreting the level of ICT used in the nation. Developed ICT structure creates a premise for innovation by allowing the use of advanced technology and developed communication systems (Schwab 2018).

Fourth pillar is called macroeconomic stability (Sala-I-Martin 2008, 4).

Macroeconomic stability measures the level of stability in the nation's inflation or budgeting for example. Low level of stability can cause decrease in global interest between foreign companies. (ibid.)

Fifth pillar, health, measures nations capability to ensure physical and mental health in the society. High level of health can correlate into talented and successful future employees and leaders. (ibid., 5)

Sixth pillar outline skills in the society by analysing among others interpersonal skills, critical thinking and education. Focus in human resource in increasing around the world and high level in skills benefits the nation by producing highly skilled labour force. (ibid., 5)

Seventh pillar, product market focuses on the market availability for the companies. Nation to allow equal market to companies increases competition in the country and therefore creates competitiveness. The increase in productivity is caused by new innovations and developed products. (ibid., 5)

Eight pillar captures the labour market and the efficiency in locating talented employees into a suitable job. Efficient labour market fosters good skill development and talent management and altogether increases the company's productivity by enriching its labour force. (ibid., 5)

Ninth pillar defines the broadness of the nation's financial system. Well allocated capital and availability of financial products such as equity, debt and credit enable investments and opportunistic behaviour in the society. These factors are related to creation of new businesses and investment plans. (ibid., 5)

Tenth pillar focuses on market size of the nation. Access to large domestic and foreign markets enable nations access to diverse and talented labour force. Economies of scale rises from the size of the market and therefore a larger market access will benefit the countries productivity. (ibid., 6) Trading becomes even more significant part of the business and therefore focus should be equally in international markets (Schwab & Porter 2009, 6).

Eleventh pillar, business dynamism, effects on the country's ability to create a risk-taking environment (Sala-I-Martin 2008, 6). Risk-taking environment supports new innovations and disruptive technologies to be created. Effective business dynamism allows companies also to exit and enter the markets relatively easy. (ibid.)

Twelfth pillar outlines innovation capability. The country's ability to create cooperative opportunities between disciplines will create a base for innovations and diverse business models. Country ability to foster creativeness and collaboration is linked to innovation capability. (ibid.)

2.2.2 Emerald model

Cluster studies executed in 2012 by Reve & Sasson (2015) created a new tool called Emerald Model to analyse dimensions affecting clusters. Dimensions were created to measure the level of strength and attractiveness of a cluster (ibid.) In accordance to analysing cluster, Emerald Model has been used to analyse competitiveness of a country or a region (Akpinar et al. 2015). However, the feasibility is still yet to be studied before fully implementing the model to competitiveness studies (ibid.). Reve

& Sasson (2015) argue that the model, by its variety of point of views, enables multiple different forms of studies to be created.

The Emerald Model refers to hexagon structure, as the model introduces six different point of views for analysis (Akpinar et al. 2015). As seen in Figure 2, competitiveness is analysed by attractiveness of cluster, education, talent, R&D and innovation, ownership and environment. (ibid.)

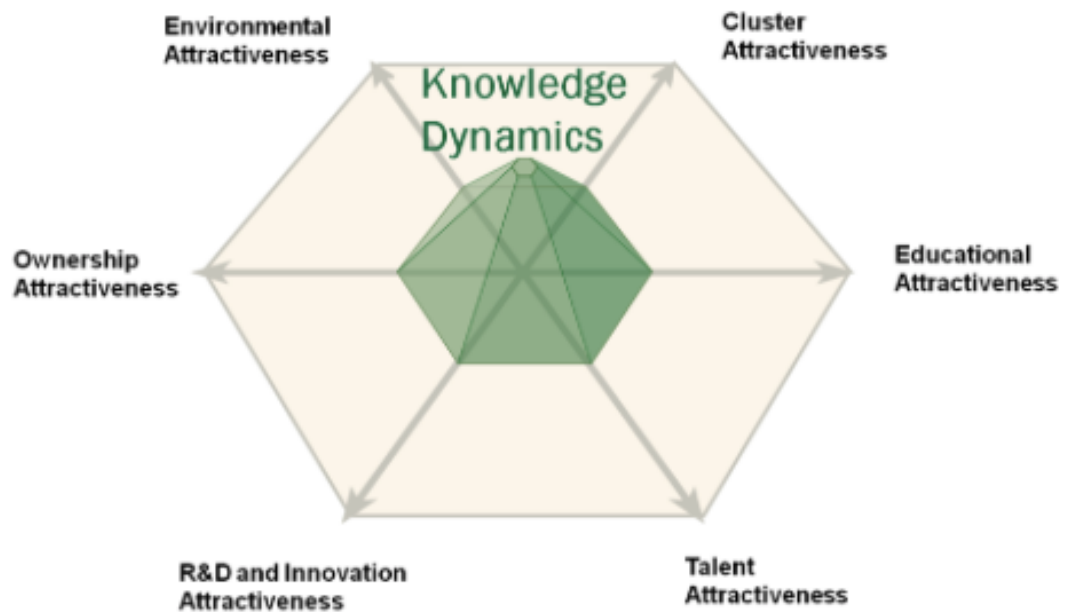


Figure 2 "Emerald Model" assessing cluster attractiveness and competitiveness. (Sasson & Reve 2012)

Cluster attractiveness describes whether the cluster is externally considered as attractive (Sasson 2011). This analysis considers regional distribution of firms, ability to create value and if the cluster contains relevant activities needed (Ibid.). Well working cluster attracts new employees to the area but also talented employees attract new employers to the area (Sasson & Reve 2012, 3). By making the interaction of talented employees and employers benefit both parties and thus create alliances and networks. The level of international collaboration in the cluster will create an advantage in clusters competitiveness by attracting skilled labour. (ibid.)

Educational attractiveness considers whether the cluster has access to talented human capital (Sasson 2011). Educational institutions provide information for the companies and an access to these talented people is vital to be able to succeed with

challenging knowledge (ibid.). Sasson and Reve (2012, 5) emphasize that to achieve educational attractiveness, investments to education needs to be made in an early stage even though it does not directly relate to industry at that stage. Educational attractiveness is therefore a long-term goal (ibid.).

Talent attractiveness refers to clusters ability to attract talented employees to the area (Sasson 2011). Interest to talented workers has increased the competition and by analysing whether the cluster has access to talented workers can provide knowledge of the cluster's competitiveness (ibid.) Diversity and media appearance will affect on the attractiveness and therefore need to be considered (Sasson & Reve 2012, 6).

R&D and innovation attractiveness considers whether the country can utilize the innovativeness to match their R&D expenditure (Sasson 2011). By focusing on usage on research and development, the clusters structure of R&D can be clarified to understand whether new companies find value to locate their innovations to the cluster (ibid.). Attractiveness in R&D and innovations can open new possibilities for clusters for example, new set of resources, executives, employees and companies (Sasson & Reve 2012, 7).

Ownership attractiveness identifies the ability to attract foreign or national capital (Sasson 2011). Capital is used for financing activities and ability to attract competent capital for innovations and new projects will provide increase in competitiveness (ibid.). As well as the ability to attract new investors, cluster current set of investors and capitalists offer increase in attractiveness (Sasson & Reve 2012, 8).

The ability to focus on the environmental issues provide an interest in environmental attractiveness (Akpınar et al. 2017). Environmental attractiveness analyses the company's abilities to generate products and services that can be considered as environmentally friendly (ibid.). As interest in environmental issues are increasing, the leading cluster are the ones benefiting from the environmental attractiveness (Sasson & Reve 2012, 8).

2.3 Theoretical framework

Porter designed the diamond model to analyse the national environment and specifically its competitive advantage (Porter 1990, 17). Riasi (2015) argues that Porter's model can evaluate the competitive advantages in global scale by focusing on four determinants. Basis of the diamond model is to explain the reason behind certain companies' success based on their location (Bakan & Dogan 2012,442). Four determinants were created after Porter's four-year study of ten trading countries (Jin & Moon 2006). It has been argued that diamond tool however is flawed by not taking into account trading partner, diminishing its value regarding smaller nations which are dependent on trading (Smith 2010, 119). Smith emphasizes that the diamond model should be used to analyse the competitive advantage of a certain location, instead of trading (ibid.). As seen in the Figure 3, the diamond model consists of four main determinants and a change in one of these determinants will alter the other ones (Riasi 2015). These four determinants (Figure 3) consist of factor conditions, demand conditions, related and supporting industries and firm strategy, structure and rivalry (Porter 1993, 77).

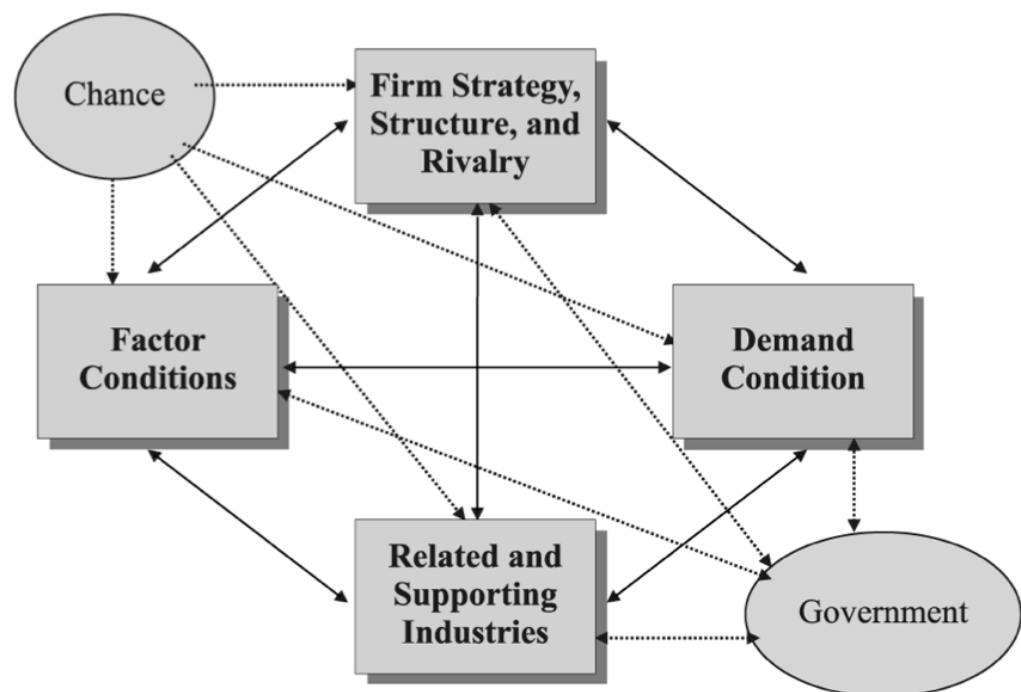


Figure 3 "Diamond Model" (Porter 1993)

Factor conditions refers to factors of production, hence, the attributes that are evident in the nation or the area itself such as natural resources or factors that are produced in the nation for example, infrastructure (Porter 1993, 77). In areas that have a high skilled labour and infrastructure will be highly competitive in factor conditions (ibid. 78). Human resources are seen as a part of factor conditions which emphasizes that these conditions are not solely inherited but instead created in the nation. To increase competitiveness, these factor conditions need to be able to add significant value for the nation. All the countries will not have the same factor conditions and Japan for instance, has spurred its competitiveness without benefits of natural resources but instead, human resources and infrastructure (ibid.) Bakan & Dogan (2012, 444) suggest that factors can be divided into smaller categories, basic and advance factors, generalized and specialized factors and inherited and provided by the nation.

Demand conditions indicates to the demand of the certain area, for example the size of the home market (Porter 1993, 79). Globalization should not be confused with home market demand as a diminishing quality but instead, the home market needs to be seen as the early platform where the product or service can be tested before internationalization. Aim should also be focused on the behaviour of the home market rather than the size of it, as markets differ by their customer behaviour. Home market can gain competitive edge if the companies in the home market refer a certain home market segment as more attractive than equal foreign segment. (ibid.) Demand conditions can also affect to innovations by increasing their pace (Bakan & Dogan 2012, 444). Porter (1993) studied certain Japanese construction equipment and noticed the home market being more interesting customer segment than foreign competitors, focusing company's action in the home market. The emphasis should not therefore be in globalization or international competition but instead the behaviour of home market customers and in nations values. (ibid.)

Related and supporting industries focuses on the nations other industries that can be considered as internationally competitive (ibid., 80). Internationally competitive related and supporting industries in nation are beneficial to the competitiveness by providing access to machinery, knowledge, innovations, cost-effective processes and beneficial working relationships (ibid., 80-81). Bakan & Dogan (2012, 445) underline

that these industries are vital for competitiveness. Interconnected companies benefit each other by the ability to develop their services to increase the efficiency and productivity of the partnership. According to Porter's (1993) studies, Italian leather shoe companies share information on what kind of products to be created according to current trends and style preferences. Porter (1993) however reminds that these alliances cannot be accomplished without the geographical proximity.

Firm strategy, structure and rivalry emphasizes the importance of culture of where the company operates (Porter 1993, 81). Northern countries and Southern countries in Europe have different type of organizational structures and strategies, and without understanding these factors competitive advantage will not be accomplished. Some industries are formed in certain countries because of these structural and strategical characteristics and thrive in these areas because of it. Rivals create a competitive advantage by forcing companies to compete from the customers. Competitive advantage inside a nation has been seen as negative factor, but Porter reminds that efficient rivalry inside a nation increases the nation's ability to compete over foreign companies. (ibid.) By efficiently competing in domestic market can create competitive edge also towards international firms (Bakan & Dogan 2012, 445). After all, domestic companies benefit the nation more than foreign companies (Porter 1993, 82). Rivalry will increase innovations, for example sustainability will have more focus if some of the local companies gain competitive edge by providing it. This will force competitive companies to innovate towards customer preferences. Rivalry shows how competition will reinforce the domestic market by creating platform for constant improvement. (ibid.)

According to Porter (1993, 86-88), governments role has been misunderstood as it has been accused of not helping the companies enough to gain competitiveness. Instead, government should be seen as an encouraging party that promotes companies to be better competitively. However, government plays a part in creating a successful environment for the companies to operate in, however these needs to be when other determinants of the diamond are working. By creating an allowing environment where companies can increase their competitiveness, gives government a role of indirect influencer. Changes in governmental topics are

relatively slow and the visibility of these changes can occur after several years. Although government is responsible of certain nationwide developmental projects, such as basic infrastructure, according to Porter, these do not create significant competitive advantage. Highly advanced developments are the ones that create competitive edge. Regulations are a tool to gain competitive edge by forcing positive change in companies. (ibid.) Positive gain can be therefore achieved by increasing innovativeness in companies' actions for them to be able to obey these regulations (ibid., 87). Governments ways to increase competition can backfire and therefore government should not be seen as a direct party to increase competitive advantage in a country but instead as a catalyst encouraging competitiveness (Porter 1993, 86).

Chance can be seen as a disruptive factor that can affect to each of the main attributes in a way that can harm their effectiveness. Chance cannot be controlled by anyone but instead is something that can happen unexpectedly. As the government, it is not a direct factor and therefore is not included to the four attributes but can appear as an indirect attribute. (ibid., 86-88) Chance has also the ability to decrease other nations competitiveness in relation to others or even in extreme conditions, decline multiple nations competitiveness (Bakan & Dogan 2012, 446).

Moon et al. (1998) argue that diamond model itself is not sufficient enough to analyse national competitiveness. Justification is based on the idea that single diamond closes out the factors contributing to the nation outside. Rugman and D'Cruz (1993, 24) created a double diamond model when noticing the absence of focus in inward foreign direct investments (FDI). However, as Smith (2010) explained, the focus of the diamond model is to understand competitiveness in a certain location, offering international focus to be achieved by double diamond model. Rugman and D'Cruz (1993) justified double diamond model by analysing Canada. They noticed that most of the Canadian trade is done with United States, decreasing value from the single diamond model. According to this study, Canadian competitiveness would be seen as less competitive because the main trading partner US gets 70 percent of Canada's exports. (ibid.) Same phenomenon was apparent In Moon et al. (1998) studies concerning Singapore where most of the competitiveness comes from inbound FDI as well as outward FDI. Double diamond model was however also dismissed by Cho et al. (2008) as the double diamond model still failed

to take human capital into account. Dual double diamond creates a second diamond considering human factors in both domestic and international contexts (Figure 4) (ibid.).

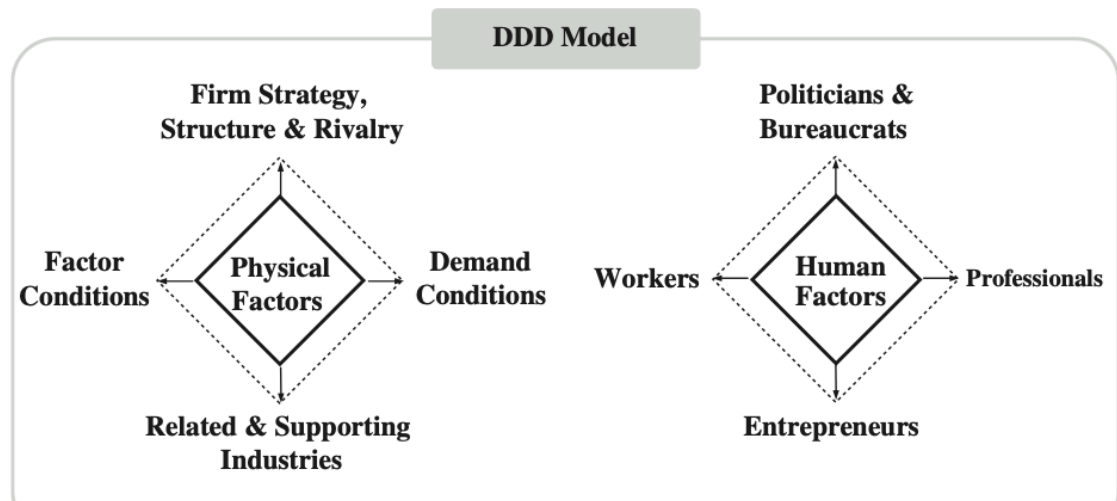


Figure 4 Dual Double Diamond model (Cho et al. 2008)

Justification for choosing the diamond model

Competitiveness of countries has been analysed through different models, including double diamond model and the dual double diamond model. According to Alberti and Giusti (2012, 263) however, regional and cluster competitiveness can be analysed efficiently with Porter's (1993) diamond model. As described by Fernando and Long (2012, 77), studies concerning competitiveness of the cluster should be focused on the industries instead of countries as cluster is often formed of international companies. This study is based on the cluster competitiveness and therefore the use of diamond model as a theoretical framework will offer beneficial insight on how the competitiveness is achieved in a company-based cluster (Ferreira & Estevao 2009, 44). Global competitiveness index is focusing primarily on the national competitiveness, making Diamond model more efficient approach to cluster competitiveness (Porter et al. 2008, 43). As argued in previous studies, Emerald model has been least studied approach and the feasibility is yet to be studied (Akpınar et al. 2015).

3 Methodology

Research questions are in the centre of the study and therefore a sufficient methodology needs to be considered. Ability to understand the topic thoroughly, right questions should be asked to gain a holistic understanding that can ultimately benefit further studies as well. Reliability and validity are under assessment and thus, the correct methodology had to be chosen judiciously for the study. Research focused on understanding competitiveness challenges in financial cluster of London, by defining them and understanding the ways to overcome these challenges.

3.1 Research approach

Qualitative approach was chosen for the study to be able to answer to the research questions comprehensively. Qualitative analysis was done in accordance with theoretical framework, hence new theories are not being developed. When considering between qualitative and quantitative approach, neither of the approaches are inferior to other one (Silverman 2015, 15). Instead, to consider the objectives of this study, qualitative approach offered a better fit for the research. The better fit was offered for the research as qualitative study accepts more dynamic environment and the data does not need to be gathered only in numerical sense, as numerical data from the topic is currently scarce. Qualitative study takes place in a context of cultural, political and social context (Creswell 2012, 44). Qualitative research also takes into account the natural setting of the study, by researching the phenomena in the same setting where the problem is located. Therefore, qualitative study is understanding the phenomenon in its natural habitat, aiming for more fundamental and deeper analysis. Qualitative approach attempts to understand a problem from multiple different views by utilizing diverse methods. (44-45.) two of these methods are exploited in this study as well, interviews and secondary data. Researcher is using qualitative approach to acquire information from, not only secondary sources, but as well from professionals in the field in order to expand the findings of the study.

As previously discussed, quantitative and qualitative studies are neither inferior to other, but rather different approaches. Saunders et al. (2009, 151) simplifies,

generating or a use of numerical data in studies in a form of graphs or questionnaire, implies to quantitative research. Non-numerical data, in forms of interviews and categorization of data on the contrary, indicates the research to be qualitative by its nature (151). Considering which approach to implement in a research, culminates into the type of data that researcher needs to achieve from the study (Davies & Hughes, 2014, 9). Therefore, because of the constant volatility of London financial cluster and limited amount of numerical data, qualitative approach provided broader image of the research problem. As previously pointed out, qualitative study offered ability to gain knowledge from industry professional to back up and counter the knowledge found from secondary data.

Diamond model is used as a theoretical framework to analyse the competitiveness of the cluster to discover the challenges it encounters. The model creates a platform for deeper analysis with the four key determinants. By studying these perspectives broadly, a holistic image of the key challenges can be formed. Low level of complexity in the theoretical framework offers a simple way to condense the study to answer the research questions. Data gathered for the analysis, using Porter's diamond model, comes from research of secondary data and interview answers. These together helps to form the overall picture of the current problems, hence answer to the research questions.

3.2 Research context

Research context provides the reader the understanding of the setting where the study takes place. Therefore, reader can better understand what things to consider when reading the study. This research takes place in the London financial cluster which is located in "The Square Mile" or better known as "City of London". To elaborate the significance of the cluster, more specific information is provided in the form of numbers (see Table 1).

Table 1. London financial cluster indicators (Adapted from City of London jobs are growing 2019)

Indicator (London)	Amount
Financial/Professional jobs	776,000
Percentage of high skilled labour	71,4%
Financial service exports	36,7 Billion GBP
Foreign direct investment from 2014-2018 (projects)	289 Projects
Foreign direct investment from 2014-2018 (pounds)	2,6 Billion GBP
Number of jobs foreign direct investment created 2014-2018	8312 Jobs

The cluster is focused in an area that is densely populated during the days as there are over a half a million jobs in the specific geographical district (Table 1). London first gained its prominence by insurance and accounting. The rise of banking sector in the 19th century, however, rewrote the city's structure of business. Adapting to globalisation in form of allowing international banks into the city, enabled the city to gain a lead in financial competition. At the turn of the 20th century, the importance of investors increased considerably causing financial services to adapt to international markets, as a significant part of investments came from abroad. London's ability to adapt eventually affected to its prominence by offering novel and profitable investment opportunities. (McRae & Cairncross, 2018.) According to Chapman (2020), the importance of investments has increased constantly during the years as new international companies have gained interest, while still needing to cope with difficulties affecting the cluster.

London financial cluster consist of the core cluster, related industries, talent pool, infrastructure, promotional organisations and regulatory authorities (see Appendix 2). All of these parties are involved in creating the cluster's competitiveness. The core cluster consist of three main industries, banking and exchanges, insurance and Baltic exchange. Banking and exchanges consider commercial banks, investment banks, private banks, funds and exchange markets such as London stock exchange. As it is apparent in the arrows in Appendix 2, each entity in the core cluster needs another to be able to function properly. As previously mentioned, insurance has been a major factor in the financial district of London and therefore creates a large part of the core cluster. The district contains individual insurance companies but more importantly, Lloyd's of London, that works as an international marketplace for insurances (what is Lloyd's, 2020). Baltic exchange is a separate entity from the other exchanges as it is the one of its kind in the world in providing a maritime market independently (The Baltic Exchange is a Foundation member of Maritime London, 2020). These are the entities that create the core cluster and therefore the main financial services.

Related industries include other industries that are connected to the financial cluster. Business services, such as accounting, consulting and auditing as well as financial media are indirectly connected to the clusters' competitiveness. Venture capital, private equity and IT infrastructure are also related to the cluster by enabling the financial and economic growth in the city. (Appendix 2.) Cluster is also regulated by authorities and United Kingdom has worked towards transparent approach to increase the competitiveness of the cluster by attracting international financial services as well (Allen et al. 2007, 17). Promotional organisations are, as it is apparent by the name, fostering and assisting the cluster. Promotion is done by supporting the companies that are intending to work internationally or intending to come to UK. Infrastructure to support the international organisations and clients as well as domestic ones is necessary to retain the attractiveness. Final entity in financial cluster is human resources, London offers multiple universities and most of the studies include an opportunity to study finances and economics. Large corporations in the cluster also offer a possibility to study while working to enter the financial industry. (17.)

3.3 Data collection

Data collection aims to describe the methods used in the study to collect the analysed data. These methods vary between studies and according to the needs of the researcher. As mentioned earlier, the type of findings the researcher aims to find, defines the methods used. Data collection methods are often used together with others to offer rounded perspective to the issue (Saunders et al. 2009, 146). Collection methods are therefore mixed by using, as in this study, secondary data and interviews combined. The advantage on using existing data comes from the possibility to do a research with a time limit (Doolan et al. 2017). As the data is already to be found from multiple sources, the data collection is broad enough for the research. This type of data can be found from news media, academic records or for example previous research studies (2). Companies themselves can provide information as they are, to certain extent, required to publish information. According to Creswell (2007, 118), Data collection process can be considered as a circle without a specific starting point. Consequently, the circle (see Figure 6) gives a researcher a possibility to follow the process circle according to their own needs. Therefore, researcher is not bounded by specific demands of research process but can adapt the data collection to tone with the questions and objectives of the study. (118.)

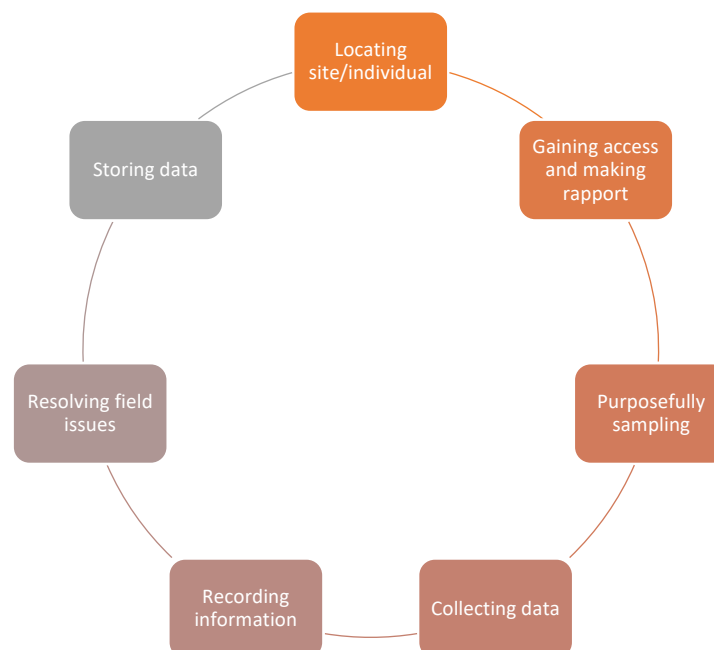


Figure 5. Data collection process (adapted from Creswell 2007, 118)

Secondary data can be divided to different types of data, documentary, multiple source and survey secondary data (Saunders et al. 2009, 259). Documentary secondary data consist of written materials as well as non-written materials. Journals, books, magazines and news information can be used as a written secondary data. Non-written on the contrary can be found for example from voice or video materials. (259.) Documentary secondary data was used by the researcher in forms of journals, newspapers, books, articles together with others. Survey based data consider censuses or specific surveys produced by academics and government among others (259). This kind of data was used in a research of London population among country specific information. Rich secondary data was gathered from multiple different sources to ensure the reliability of the study (see Table 2). The large amount of relevant secondary data enabled the author to not to focus excessively to the collection of primary data.

Table 2. Main sources of secondary data.

Main sources of secondary data	
1.	For the internet news, the main sources were;
	- Financial Times, The Guardian, The New York Times, The Independent and The Wall Street Journal.
2.	Webpages for location specific information;
	- City of London website, Corporation of London and Bank of England
3.	Reports for the global competitiveness;
	- The World Economic Forum
4.	Previous studies relevant to the research;
	- Frankfurt financial cluster study, Global financial centres index, Global fintech index
5.	Journals from relevant topics;
	- Harvard Business Review, Foreign Affairs, Management International Review, Business, Management and Strategy, Competitiveness Review, Economic Development Quarterly, International Business Review, The National Competitiveness Council.

All these secondary data methods were used to provide information from variety of sources without undermining the others. Secondary data for this research was gathered while keeping in mind theoretical framework as well as the objectives of the study. As mentioned before, secondary data is beneficial in saving resources and providing a possibility to create a larger study without investing extensively in primary research. Secondary data can additionally offer comparative data as previous studies and researches are in one's disposal (ibid. 260).

Primary data differs from secondary data by the way it is collected. As secondary data is gathered from previous studies, primary data comes from a research that the researcher conducts itself during the study. Primary data is beneficial for not only the research but socially as well by providing information that can be used in future studies. Qualitative primary data can be collected through either solicited methods or spontaneous data. Solicited consist of interviews, focus groups and unstructured diary. Spontaneous indicates to participant observation and existing records such as, images or news archives. (Hox & Boeije 2005, 593-596.)

Semi-structured interview was chosen as a qualitative primary research method to best answer to the research question. Primary data itself provided additional and diverse data to be able to have a comparison between primary and secondary data. Semi-structured interviews provide a possibility to gain knowledge outside of the original scope of interview (Saunders et al. 2009, 320). Questions and topics are created but the structure of the interview is adjusted throughout the interview to correspond the flow of the conversation. However, semi-structured interviews offer additionally a possibility to create new questions in the course of the interview. Structured and unstructured interviews are possible options to use when conducting interviews. Structured interviews are implemented by asking the specific questions in a standardized manner. (320.) The basic idea of structured interviews is to obtain quantifiable data. However, structured interviews did not provide the required scope towards answering the research questions. Unstructured interviews on the contrary are characterized as informal interviews. The premise of these interviews is to dive deep into the topic without even having specific interview questions. Hence, the interviewee is given unstructured opportunity to answer to the questions as well as provide beliefs about the topic. (321.) Therefore, unstructured interview was not

chosen for this research as the answers need to be answering certain questions to gain comparative knowledge alongside the secondary data.

Interviews were conducted to gain knowledge from the professionals in the field. The researcher however faced limitations by lack of funding to take the research to the cluster's geographical area. Consequently, to gain utmost benefit from the interviews, the researcher considered to be the best to consult professionals from the field itself. The topic considers the financial cluster of London and therefore, for the reliability of the study, interviewees needed to have knowledge from the finance in overall level as well as in international level. These interviewees were financial professionals from Finland who worked in positions that consider in addition to Finnish markets, international finance markets as well. Interview language was decided to be Finnish to increase the reliability of the answers to decrease misconceptions caused by a language barrier. The questions for the interviews were created well before the interviews to adjust them to answer the questions properly. Interviewees got the questions before the interview to prepare for them as they were not currently working in the geographical location of the research (see Appendix 1). Interview questions were formed according to the theoretical framework and therefore, the questions covered each of the four determinants of the framework. Ultimately, this enabled the author to gain information from each of the determinants equally.

While conducting the interviews, ethicality of the research was considered. Both of the interviewees were asked a consent to use their titles and organisation where they are working currently. However as only other one of the interviewees provided the permission to use name, title and the company, it was considered to be better to not provide any names.

3.4 Data analysis

Data analysis process, according to Creswell (2007), is a spiral form (see Figure 7), covering four key phases of the process. At the beginning of the spiral, in the data managing phase, the researcher manages the data into units and files to make it

possible to control a large number of data (150). At the first phase, the author started to manage the data from the secondary sources to gain an understanding of the topic. The secondary data was gathered from multiple sources and categorized by the topics to create folders where to find relevant articles and books when needed. Primary data was collected and recorded through interviews. The recordings from the interviews were then transcribed in a word document and each of interviews were transcribed separately.

Subsequently, the data analysis process aims for critical reading and coding of the data (ibid.). It is suggested that the researcher examine the data several times before diving into the data more specifically to gain a holistic view of the issue at hand (151). Critical reading was conducted while the author introduced himself into the relevant literature. Relevant literature was gathered in the data managing stage and afterwards read multiple times to understand the holistic picture of the topic. Multiple readings with a lot of secondary data gave the author a possibility to understand the bigger picture while trying to restrict the biased opinions of the articles.

In the third part, the research is described specifically by creating themes and aspects to interpret the data properly (ibid.). However, Creswell (2007) emphasizes that these categories that are used to describe and classify the data, need to be controlled to avoid the excess of data when conducting interpretations to properly answer the research questions. Consequently, not all of the data gathered is valuable for the study (152). The author created specific themes to analyse the data while separating the information in accordance to the theoretical framework. By separating and classifying the data, it created a platform to reach for topic specific information when needed as well as it helped to analyse which of the sources were relevant for the study. Accordingly, to secondary data, primary data gathered from the interviews was classified according to the theoretical framework. Theoretical framework created four main categories to which the data was divided. Factor conditions, demand conditions, related and supporting industries and firm strategy, structure and rivalry were the categories to which the data was divided.

In the final part of the data analysis process, researcher needs to represent the findings from the study. The representation of the findings can be done by utilizing figures, matrixes and comparison tables among others. (ibid. 154.)

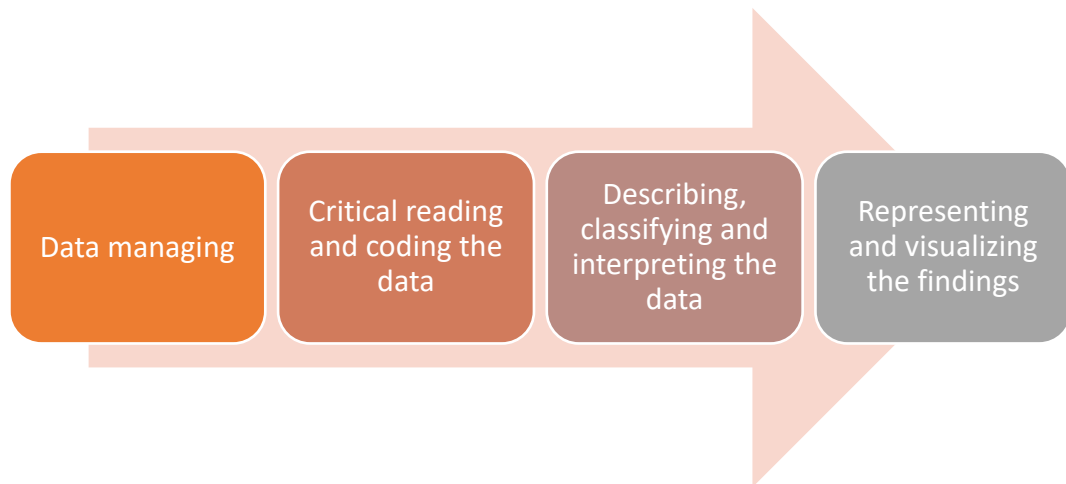


Figure 6. Data analysis process (adapted from Creswell 2007, 151)

3.5 Verification of findings

Validity

The ability to obtain valid data in a research is a key to create a meaningful research. However, as Saunders (2009, 273) explain, it can be relatively easy to find information that causes the researcher to connect wrong dots when establishing the big picture. Creswell (2007, 271) describes the validity to be the desired outcome of any research. Validity was considered through triangulation however; the authors personal bias was taken into consideration.

Knowledge of the financial industry was established by the author by working four months in a bank. The personal interest of the author towards the industry domestically and internationally provided existing knowledge to further dive into the subject of the research. Further studying the research topic introduced new information to the author to study the topic from multiple different point of views. Triangulation was used to both increase reliability, as well as validity. Triangulation method refers to using multiple different sources of knowledge (Creswell 2007). These sources can include investigators, theories and evidence among others. More

importantly, the main focus of triangulation is to verify the data by studying the subject from multiple point of views to corroborate the information. (208.) When taking into account the external validity, the research is not considered to be generalisable as the factors considered in the study strongly rely on the financial capabilities of the London financial cluster. Additionally, the situation of the London financial cluster is under constant change as the political changes are affecting the decisions made in the area. Therefore, the information found in the research is time specific and cannot be generalised. Consequently, the knowledge gathered from the study are only related to the specific financial cluster.

Regardless of the previous knowledge from financial industry, the author realises the personal bias in the research. Bias to the study stems from the short period of time in the industry as well as the fact that the specific location relevant to the study is in another country. Study is conducted only by considering the data analysis methods of a single person. Therefore, the interpretations apparent in the research are to some extent biased. However, the knowledge gained from multiple secondary sources decreases the amount of biased opinions as the information is compared through different scientific records. Subjectivity is apparent in almost every study as the researcher's opinions can affect to the interpretation of the data. Finally, the study was conducted in a short period of time that sets limitations to the amount of information studied.

Reliability

Initially, the interviewer asked for the permission from the interviewees to record the interviews. Recordings of the interviews enable the author to revisit the information to increase reliability of the study. Recordings additionally enabled the creation of the transcripts where the data could be in the results chapter gathered. For the research to be reliable, the methods the researcher use and sorts of outcomes they produce, need to be consistent (Saunders 2009, 156). To ensure reliability, checking the transcriptions are important. When implementing the coding of the gathered data, it is considered to be beneficial to create memos of the ways how to the coding was done. Consequently, this approach will decrease any inconsistencies that may appear in the coding. (Gibbs 2018.) Researcher however needs to take participant error and participant bias into account when considering

reliability of a study. Participant error indicates to a situation where the participants are interviewed in different situations that may cause differentiation in the collected data. Participant bias however is apparent when the subject of the interview is under a risk by contributing information that may be interfering with the organization's management. (Saunders 2009, 156-157.)

The author created a coding system to decrease the inconsistencies when transcribing the interviews. This coding was conducted in a way that considers the results in the specific way regardless of the time when the interviews were done. Each of the interviews were transcribed to the word to prevent any misunderstandings in the information. The interviewees were offered an ability to answer to the questions anonymously. Anonymity provides a possibility to answer to the questions without a risk of conflicting with their organisation. Therefore, it prevents the participant bias in a qualitative study. According to Saunders (2009, 328), the interviews needs to be conducted well prepared to the subject of the study. Therefore, the timing of the interviews was set after the author had introduced himself thoroughly to the subject.

4 Results

In this chapter, the author is presenting the results of the study considering the competitiveness challenges of London financial cluster. The results are presented by dividing the data according to four key determinants as well as chance and government. These determinants were selected according to the theoretical framework and the results were gathered from the primary sources and secondary sources also according to these determinants.

4.1 Factor conditions

According to the data gathered in the study, factor conditions were divided to four different subsections based on different resources. These subsections include human resources and knowledge resources, capital availability, infrastructure and technology and physical resources.

Human resources and knowledge resources

London is one of the largest cities in the world having a population of over 9 million people since the 2020 (World city populations 2020). Human and knowledge resources do not come only from inside the country; however, the external resources are apparent in the cluster as well. Highly skilled expatriates and immigrants are arriving to the cluster constantly. Arguably this is considered to be the cluster's most crucial part of competitiveness domestically and internationally. However, the competitiveness for the talented workforce has been increasing constantly and cluster's ability to maintain good global mobility has become increasingly important. (Hall & Beaverstock 2012, 3-7.)

In 2016, United Kingdom voted whether to stay or leave the European Union. The voters for and against divided the United Kingdom and ultimately, most of the areas of Greater London voted to stay in the Union. High vote for staying in the EU in the Greater London is considered to be explained by the high number of immigrants living in the area as the connections to other EU countries was considered to be under a risk. Additionally, the business community supported staying in the EU and especially the companies having their headquarters abroad. (Colantone & Stanig 2016.) Brexit votes and discussions set in motion an uncertainty of what was going to happen in the country domestically and internationally.

For a long period of time London has been benefiting from the number of international employees in the cluster. Interviews explained how the uncertainty is the poison for the clusters ability to retain talented workforce. Uncertainty can cause a decrease in jobs which ultimately can lead into brain drain from the cluster. From 2017 to 2019, financial jobs have faced a decrease in London financial cluster (Enver 2019). Both the jobs as well as the job seekers have decreased significantly (see Figure 7 and Figure 8). Year-on-year job availability has decreased 50% in the last 2 years and the number of professional job seekers has decreased 19% in the same time period. (ibid.)

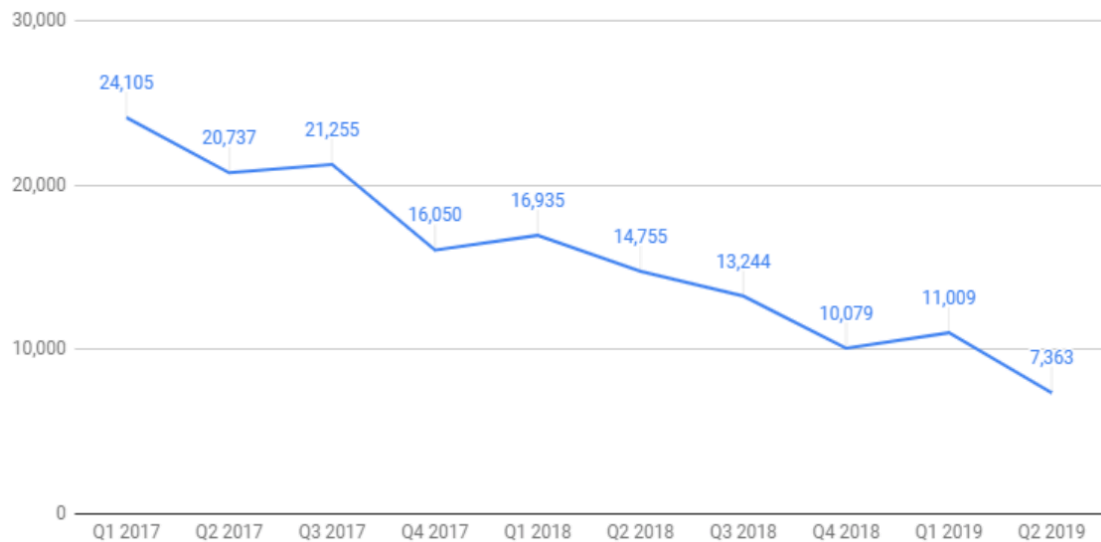


Figure 7. Number of financial jobs in the London cluster quarterly (Enver 2019)

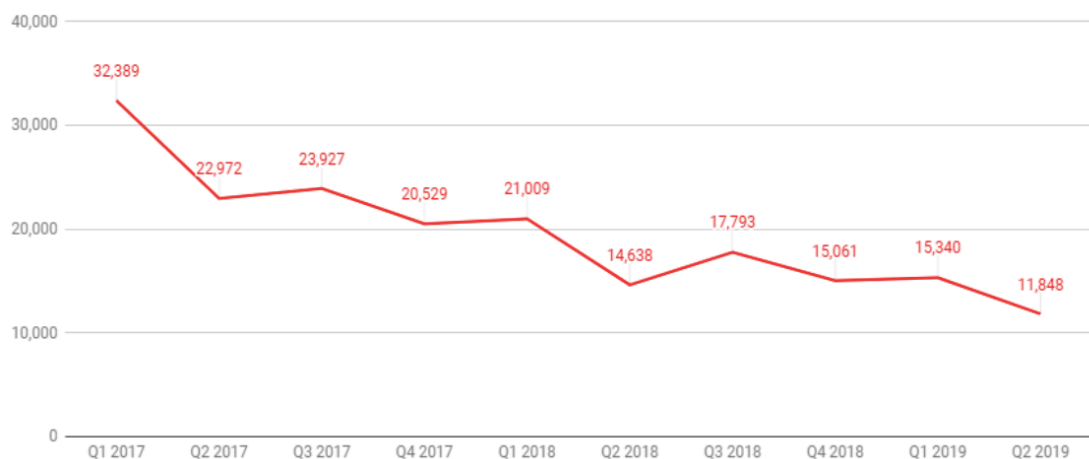


Figure 8. Number of financial job seekers in the London cluster quarterly (Enver 2019)

Multiple companies have decreased the amount of business in the area by either moving completely from the country or to just open new branches in EU countries (Chapman 2019). Interviews revealed that if the branches are opened to different countries, the talent pool will be divided and eventually will affect to competitiveness by decreasing professionals in the cluster or decreasing attractiveness of the cluster. He also added that attractiveness in the eyes of international and UK students will decrease if job opportunities are diminishing in the

cluster. As previously mentioned, international talent is one of the most important factors in the cluster's competitiveness.

According to the interviews, the key challenges concerning the human resources in the cluster arise as the firms are relocating their services to different countries. This ultimately affects the attractiveness of the cluster in the eyes of educated professionals and students applying to universities, challenging knowledge resources. It was therefore emphasized in the interviews that the importance of offering opportunities for employees to work also outside the cluster to retain talented professionals. To maintain students in the cluster, existing companies need to be able to offer opportunities for the students even while studying. Job opportunities will increase the attractiveness of the cluster if the students will have confidence of getting positions after studies. Since the separation from the EU, challenges are faced inside the country and other regions of England are becoming more attractive for the businesses (Parry 2019). Employees and students can now find interest outside London as the power of the city has started to divide to other cities in the UK as well (180). While talented students and employees leave London, challenges rise for the human capital.

London also has a highly developed research systems as it is a home to Financial Markets Group Research Centre (FMG). FMG is one of the Europe's most respected research centres studying the financial markets. (Frankfurt Financial Cluster 2017.) The investment made for R&D are 1,68% of the UK's gross domestic product and most of these currently go into the cluster. This has since increased R&D in the cluster a lot as there are a lot of capital for it. (Porumbiou et al. 2017, 18.) Even as the London financial cluster is home for the actual research centres, there are other institution providing R&D as well. London has also a close proximity to famous universities such as Oxford and Cambridge. These universities are implementing several studies and, hence benefiting the cluster. (Driving Forces of the Cluster Formation n.d.)

Capital availability

Capital resources and availability is important when it comes to success of any financial cluster. Stock exchange is valued through different parameters and as of

2018 London Stock Exchange market capitalisation has been around 4.5 trillion USD while daily average in trading has been over 200 billion USD. When considering the market capitalisation of London Stock Exchange, it is considered to be world's seventh largest stock exchange. (TOP 20 Biggest Stock Exchanges in the World – Largest Stock Exchanges by Market Capitalization 2019.) Hence, the large amount of stock exchange increases clusters capital availability by making it one of the most attractive trading locations in the world. Large stock exchange has direct connection also to the number of derivatives traded in the cluster. The large stock exchange has been attracting thus other trading to the cluster such as derivatives. According to the interviews, most of the European derivative exchange happens in London. London derivatives market consist of 540 trillion USD global off-exchange derivatives making it the biggest market in the world (Jones 2019). However, when considering the current state of the derivative market in the UK and London, challenges are evident. Derivatives are traded in the cluster in certain currencies, and the most traded currencies are euro (EUR), British pound (GBP), Japanese yen (JPY), Australian dollar (AUD) and Swiss franc (CHF). EUR having been the most traded currency for derivatives since 2010, currently has been decreasing. 2016 was the year of referendum whether to stay or leave the European Union for the UK. Ever since, the derivatives turnover has been decreasing for the EUR currency (see Figure 9).

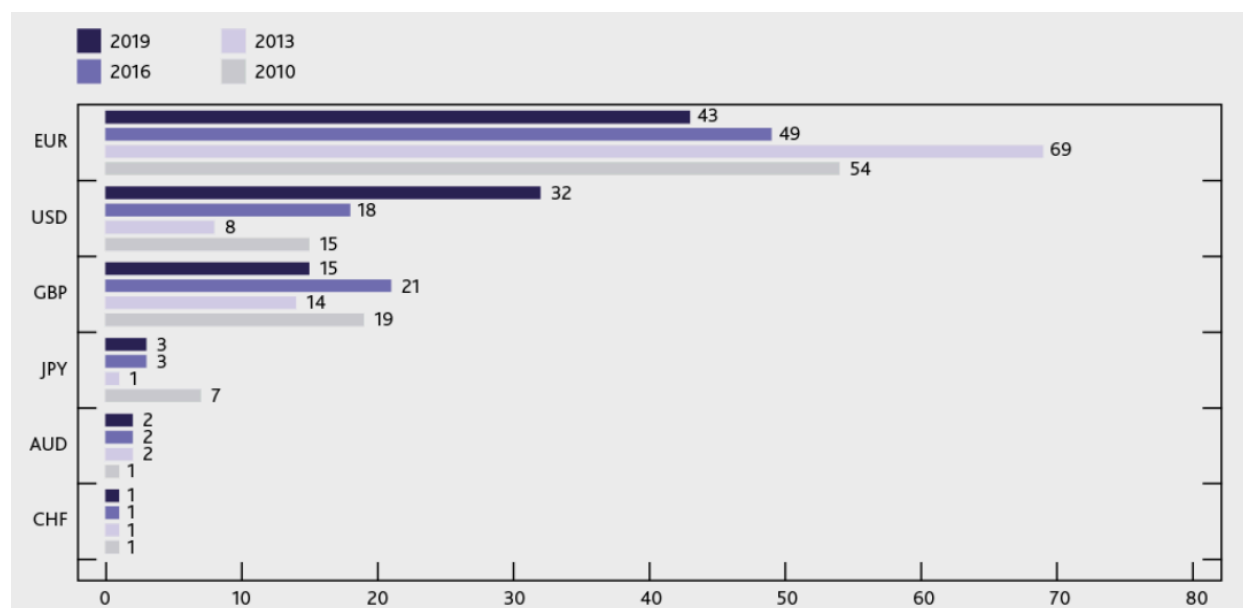


Figure 9. Derivatives turnover of specific currencies in the UK (Percentage share) (The foreign exchange and over-the-counter interest rate derivatives market in the United Kingdom, Bank of England 2019)

On the contrary, the importance of USD as a trading currency has been increasing towards the year 2019. However, to compensate the loss of EUR in derivative trading, USD has to increase its trading turnover in the cluster sizeably. Many derivatives are traded in the European Union and has increased concerns over how much of an effect does it have to clusters competitiveness. Therefore, as interviews explained, derivative market causes challenges as the EU may restrict the derivative market that affects the countries in the union. These challenges arise by the actions of European Central Bank (ECB) as they have the ability to control the derivate market in the union. All the derivatives may not be affected by the actions of ECB, but the clusters market has already been affected by the loss of EUR derivatives (see Figure 9).

Infrastructure and technology

Financial infrastructure is the premise for any financial cluster. Financial infrastructure consists of financial intermediaries, markets and assets (Mukher 2020). As previously mentioned, the capital availability is included in the financial market subsection. Financial assets refer to for example primary or secondary securities, markets refer to money and capital market and intermediaries to either banking related or other financial institutions (Mukher 2020).

London financial infrastructure therefore consists of multiple organizations that are supporting the economic growth of the cluster (see Figure 10). These organizations are all involved in making the cluster competitive.

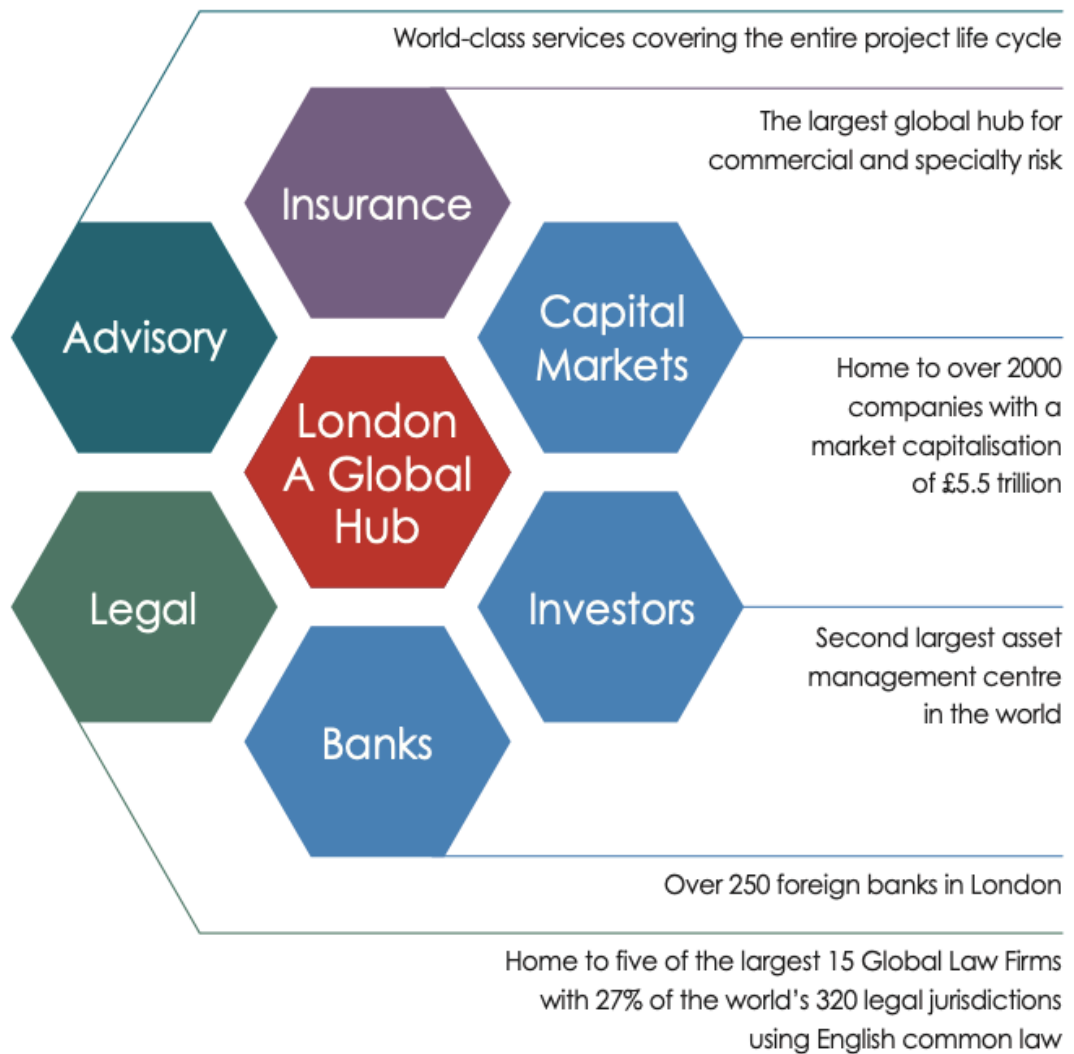


Figure 10. London financial cluster infrastructure providers (London: A Global Marketplace for Infrastructure Solutions. City of London 2020)

Challenges facing infrastructure are wide as there are significant number of organisations involved. As City of London announced on their report in 2020 *“Fiscal pressure is being increased on the public sector through a host of different challenges; climate change, population growth, urbanisation, rapid technological innovation, globalisation, changing trade flow patterns, as well as a legacy of ageing or poorly managed assets.”* Infrastructure planning is therefore the key to cope with these challenges. In 2007 the financial crisis affected the world of business by decreasing the amount of public investments. Crisis that affect the business world can often increase the amount of debt that is needed to get over the crisis. Consequently, these challenges have affected to the increasing restrictions that

financial organisation confront. However, new innovations in risk mitigation as well as in financial products have been considered to be the solution for the challenges at hand. (London: A Global Marketplace for Infrastructure Solutions 2020.)

New market needs are coming to the cluster as UK is departing from the European Union. Challenges appear from the loss of infrastructure providers if they are transferring their services abroad. However, the providers staying in the clusters need to keep adapting to the increasingly developing technology that is reshaping the industry. (Cox, P. & Jones, L. 2007, 63.) After all, 418 of the companies listed in the London Stock Exchange are foreign and are therefore under a risk of departing or reshaping their market position (Bardalai 2019, 4).

Physical resources

London and UK are located in the north-west of Europe and therefore creates an attractive location for businesses. The cluster is therefore located in close proximity to many so-called developed countries. Many central and northern Europe countries are developed countries and are located near to the cluster. Nordic countries and Germany and France are all highly developed economies and offer opportunities for the London financial cluster. This location has been considered to be an advantage for the cluster as it has been able to increase cooperation between these developed economies and financial systems. London is also a home to one of the largest airports, Heathrow airport, that offers connections to many countries around the world. However, London in total has 4 airports alone creating an effective transportation to other financial clusters. (Porumbiou et al. 2017, 8.) The location is also beneficial for the USA markets because of the close proximity. Therefore, London could be seen as connecting the two large markets. (Taylor et al. 2003, 8)

However, the location also creates challenges for the cluster as the prices are increasing fast in the cluster. Since the financial cluster has been growing, more and more investment has been made to the area. This eventually raised the premises prices significantly and creates now issues for new businesses. Barrier of entry has become even higher as the starting capital needs to be large enough to afford to set up a company in the cluster. (Porumbiou et al. 2017, 9.)

4.2 Demand Conditions

London financial cluster demand both domestically and internationally is facing challenges. Significant part, over 40%, of the United Kingdom's financial services exports destinations are EU countries (see Figure 11). Withdrawal from the EU causes challenges in demand conditions by possibly harming the financial services export between UK and EU countries (Porumboiu et al. 2017). Data from the interviews revealed that, considering business clients, financial services are the biggest export from the cluster. Additionally, there are a large number of investment funds that are registered in the United Kingdom but are sold in the EU. These funds are under a microscope as the rules for trading between UK and EU are being constructed. As well the overall attractiveness of the cluster towards international financial markets has been questioned while financial companies are doing damage control because of the withdrawal from the union. New terms, conditions, barriers of entry and overall perception comprise the international demand challenges for the cluster (Porumbiou et al. 2017). The changes facing the cluster's ability to keep the attractiveness have an effect on its competitiveness. These ultimately decrease the amount of financial services exports to other EU countries. Previously London has been able to connect international markets by its connection to overseas countries but also to the union but as the business was done through UK soil. These may harm the London financial markets significantly as these previously domestic services may leave the cluster and the country. (10-20.)

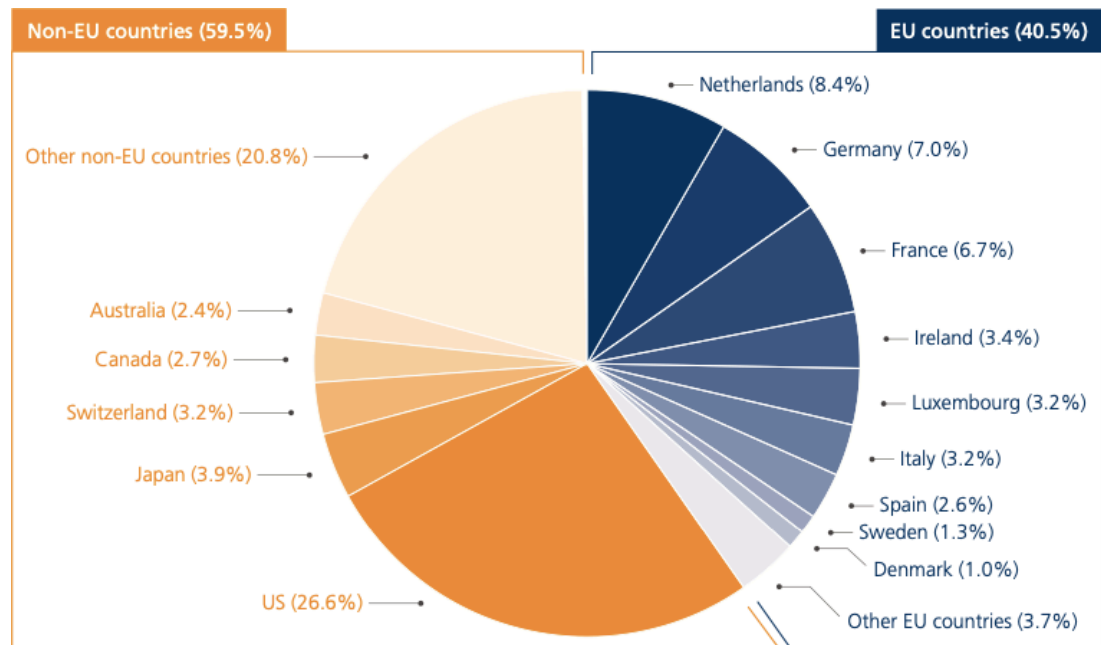


Figure 11. UK major financial export countries in the world. (Bardalai 2019)

Data received from the interviews explained that most of the customers in wealth management in the cluster come from the local customers and people. Private investment, insurance and banking customers are therefore local people living near the cluster. As well, large population and access to European talent in the cluster has been crucial for the clusters ability to be competitive in international scale. Therefore, decrease in international demand can diminish the domestic demand and hence have a direct connection.

Talent pool is not big enough for the cluster even though the population of the cluster itself is significant. Competing with clusters with many times larger population will become a challenge once the withdrawal is complete. Students will be declined to come to the city if the grants for studying disappear. As well working requirements will be facing risks as there has already been difficulties to achieve required condition to be able to enter and work in the cluster. Hence, diminishing the size of the domestic market. (Porumbiou et al. 2017, 19-20).

4.3 Related and Supporting Industries

Fintech is a growing industry in finance world and currently is worth of 7 billion pounds in the UK itself. Fintech companies tend to be smaller start-up companies which are relatively agile compared to large more stable financial companies. Innovations and disruptive technologies benefit the development of these companies and therefore offer a challenge for the competing traditional financial institutions. Fintech has on the other hand helped the traditional banks as well by transferring the services to the mobile platforms. Fintech challenges therefore the traditional financial institutions in the London financial cluster by enabling disruptive technologies that may not be adjustable or available yet to the traditional firms. This competition will create challenges to the larger companies and eventually may decrease the competitiveness of the cluster. However, fintech can be also seen as supporting industry for the cluster as fintech has been increasing its importance. (Bardalai 2019, 21.) Fintech cluster is competitive in London, however the pressure from the United States and Asia is evident. London itself is placed highly in the ranking in the world-wide evaluation. However, when considering rest of the top 20 placements, London is the only one from the United Kingdom. On the contrary, there are five American cities in the top fintech cluster positions. Therefore, London has a disadvantage in terms of support from local clusters. London may face challenges in the competitiveness as biggest rival USA will benefit from the competitive clusters inside the country as well the Asian clusters benefit their collaboration and close proximity. (see Figure 12.) But as said before, UK withdrawal from the EU may distance them from the business collaborations.

	Global Financial Centers Index 2019	Global Fintech Index 2020	Change
New York	1	3	▼ -2
London	2	2	▶ ±0
Hong Kong	3	11	▼ -8
Singapore	4	4	▶ ±0
Shanghai	5	31	▼ -26
Tokyo	6	17	▼ -11
Beijing	7	23	▼ -16
Dubai	8	58	▼ -50
Shenzhen	9	80	▼ -71
Sydney	10	13	▼ -3
Toronto	11	12	▼ -1
San Francisco	12	1	▲ +11
Los Angeles	13	6	▲ +7
Zurich	14	38	▼ -24
Frankfurt	15	39	▼ -24
Chicago	16	14	▲ +2
Paris	17	15	▲ +2
Boston	18	8	▲ +10
Melbourne	19	32	▼ -13
Montreal	20	48	▼ -28

Figure 12. International ranking for the fintech clusters. (The Global Fintech Index 2020)

As seen from Appendix 2, most important related and supporting industries for the London financial cluster consist of consulting, law, IT, business hospitality, real estate, logistics as well as media and telecommunication industries. However, a significant part of these companies are European companies working in London. Previously this has been seen as important part of the clusters competitiveness but considering the resignation from the European Union, London may be facing a large departure from the companies. Likewise, the employees of these industries are also immigrated from the other union countries. Questions are therefore raised whether these employees will stay in the cluster or is related and supporting industries facing a brain drain as well. As seen from Appendix 2, London financial centre is home to one of the largest marine insurance clusters as well. Marine insurance is one of the

London most premium industries as it has only a little competition in the same scale world-wide. (Porumbiou et al. 2017, 10-11.) As previously mentioned, London has also an international insurance and reinsurance marketplace Lloyd's of London which can consist of insurances issued around the world (what is Lloyd's, 2020). However, Lloyd's of London as well as other international insurance companies will face challenges due to the EU exit. Business between London based insurance companies and EU market will diminish as non-authorized insurance companies are not able to do business to large EU countries such as Germany and France. This ultimately increases the importance of USA markets for the cluster, however, to keep the competitiveness London still has to be able to maintain its position in EU. (Dorfman 2019.)

Previously mentioned industries are facing difficulties as while the cluster itself is facing challenges, supporting and related industries are feeling the setback as well. Once the resignation is complete, employees from London's biggest sector, finance, will stop commuting. This eventually will slow down the real estate and business hospitality in the city. (Fleming & Young 2016, 3.) Many law firms have been working between European countries and now need to be able to adapt to the change. These law firms need to be able to have the mutual market access with the union to be able to keep working as they have so far. This mutual market access would eventually ensure their ability to work in the EU countries. However, if this is not achieved, law firms are facing restructuring and relocating needs to be able survive. Consequently, these actions made by the law firms ultimately challenge the financial cluster's competitiveness. (Ferreira 2018, 5-12.)

Interviews introduced possibilities for overcoming these issues challenging related and supporting industries. Services vital for the cluster are relatively easy to outsource from other countries to mitigate the negative effects from the EU resignation. Outsourcing can therefore be used if the UK based companies want to expand their business into the EU countries to retain access to the market. Consulting firms are to benefit from the situation as they are increasing their importance in innovating solutions to these issues. Interviewees emphasized that large financial companies and institutions tend to have their own lawyers, which ultimately will help them to retain legal services.

4.4 Context for Firm Strategy and Rivalry

This section is created in the mind of international competition and rivalry. The author considered international aspect to be more beneficial for the study as there are limited information about the internal competition of the cluster. Additionally, the international competition and rivalry has been currently under the microscope as the political challenges are facing the cluster. International rivals are also gaining foothold in the international markets suggesting a need for international rival analysis.

The overall strategy in the finance cluster has been connecting international customers together. Hence, a lot of companies working in the cluster are foreign. Financial cluster has been also enabled to work with low restrictions to attract international companies. London financial centre has been embracing co-opetition in their strategy to increase the overall competitiveness of the cluster. (Driving Forces of the Cluster Formation.)

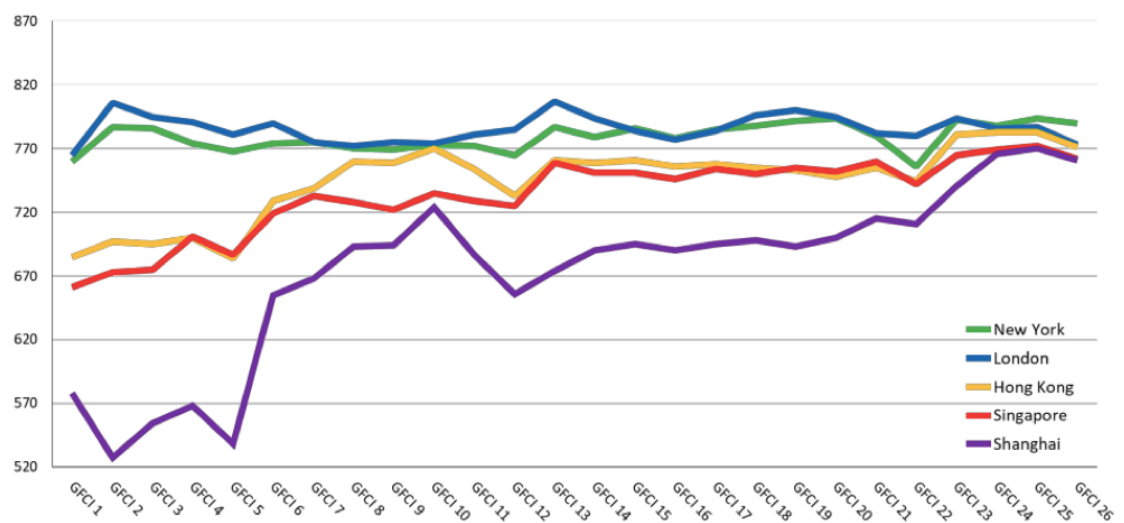


Figure 13. Top five financial clusters average rating measured twice a year by global financial centre index. (Yeandle & Wardle 2019)

Global financial centre index (GFCI) describes the development of the financial clusters (see Figure 12). GFCI is conducted twice a year to have as the situations may change rapidly in the field of finance. GFCI number 1-26 in the figure 13, describes each study conducted so far. Numbers on the vertical line on the other hand

describes the total score of the financial centre in the GFCI analysis. GFCI analyses the clusters business environment, human capital, infrastructure, financial sector development and overall reputation. (Yeandle & Wardle 2019, 7-9)

London financial cluster is facing competition and rivalry constantly and most of the competition is towards foreign financial clusters. New York has been considered to be the biggest rival for the London cluster. New York itself is home to many of the largest financial companies in the world as well as the largest stock exchange in the world, New York Stock Exchange. New York also has access to a large domestic market of over 320 million people. However even London excels in the derivative markets, foreign exchange and marine insurance, New York has the lead in private equity and hedge funds. (Porumbiou et al. 2017, 9.) Additionally, in Fintech, from the biggest 100 fintech cities in the world, USA has 22 fintech cities compared to UK's three. Fintech investments are also 9.4 billion USD in the USA and 2.29 billion USD in the UK creating a significant difference between the two clusters. (The Global Fintech Index 2020, 30.)

Rivalry stems accordingly from the Asian clusters as the biggest rivals, based on GFCI, are Hong Kong, Singapore and Shanghai (Yeandle & Wardle 2019, 7). Evident from the global financial centre index, the competition has been increasing in the past years as the gap between the centres is diminishing. London has been competing mostly with the USA but in the recent years the Asian centres has increased their competitiveness. (see Figure 12.)

Hong Kong cover a lot of Asian market by its lenient tax rates and juridical system. High amount of international banks work in the cluster as it provides strategic location for the Asian finance. Hong Kong holds its position as the financial cluster with the most banking institutions in the world. Singapore's rivalry stems from the highly developing insurance market. (Porumbiou et al. 2017, 9.) Singapore and Hong Kong are sovereign city state and special administrative region, respectively, which have attractive political and economic environment by their lenient regulation (Leung 2020; Leinbach et al. 2020; Porumbiou et al. 2017, 9). Shanghai has been growing constantly and has been increasing its competitiveness by having high human capital, infrastructure and overall reputation. Shanghai also is performing

well in the banking and therefore ranking third in the world after New York and Hong Kong. (Yeandle & Wardle 2019, 10-37.)

London faces challenges from growing number of financial centres in the large business cities around the world. Fintech, the fastest growing part of finance world, has been part of fierce rivalry as it is growing around the world. Apparent from the Figure 14 below, a lot of competition stems from the Europe as small cities has been increasing their quality of life, talent pools and start-up culture. Altogether the level of innovations in these European cities has been increasing, affecting their level of global competitiveness. (Bardalai 2019, 92.)

GLOBAL FINTECH RANK	Change from startup rank	City	Country	National Rank	Region
111	▲ +644	Valletta	Malta	1	Europe
118	▲ +167	Valencia	Spain	3	Europe
86	▲ +155	Hangzhou	China	5	Asia Pacific
104	▲ +146	Taipei City	Taiwan	1	Asia Pacific
119	▲ +136	Florianopolis	Brazil	6	Americas
102	▲ +99	Leeds	United Kingdom	4	Europe
91	▲ +81	Porto Alegre	Brazil	4	Americas
106	▲ +71	Cairo	Egypt	1	Africa
87	▲ +70	Cape Town	South Africa	2	Africa
97	▲ +63	Curitiba	Brazil	5	Americas
89	▲ +62	Geneva	Switzerland	3	Europe
94	▲ +47	Auckland	New Zealand	1	Asia Pacific
110	▲ +45	St. Louis	United States	26	Americas
103	▲ +43	Ahmedabad	India	7	Asia Pacific
93	▲ +40	Cambridge	United Kingdom	3	Europe
82	▲ +37	Oslo	Norway	1	Europe
95	▲ +35	Porto	Portugal	2	Europe
114	▲ +34	Utrecht	The Netherlands	3	Europe
120	▲ +34	Krakow	Poland	2	Europe
84	▲ +27	Calgary	Canada	4	Americas

Figure 14. Fast growing fintech clusters around the world. (Bardalai 2019, 92.)

Data gathered from the interviews explains that advantage for the USA lies in the companies working in the London cluster. As previously mentioned, many of the largest companies working in London are American companies. Especially, banking sector has a lot of companies from the USA. Many of these companies, however, keep their headquarters in American soil and much of London's competitiveness culminates in their ability to retain these firms. Hence, London faces challenges to adjust to these changing circumstances affecting the cluster. Even though London has to readjust to the new situation, challenge is to maintain its position in the global competitiveness as other financial clusters keep moving forward. Additionally, for London to overcome these issues, the collaborations with universities and other clusters is vital to keep the current talent pool and reputation. Interviews also suggested that to overcome these issues, expansion towards EU is important to not to lose the business with large European market.

4.5 Government

As revealed in the interviews, most significant governmental challenges affecting London financial cluster at the moment, are related to Brexit. Interviews conducted by the author explains that the uncertainty is the biggest challenge for the cluster. The terms of the agreement between UK and EU is under construction but the specific terms are yet to be decided. Big changes in the ways of doing business between the EU and UK may cause competitiveness challenges for the UK as they need to make significant changes to be able to do business with the union. Additionally, if the UK applies their own regulations to the financial cluster, this may cause problems as EU countries use their own regulative system with the financial industry. UK therefore need to be able to use EU regulative system when doing business with them. EU for example, has created MiFID directives for the countries in the union to unify the financial services and depending on the contract between EU and UK defines whether this causes problems between them.

Currently, the negotiations are being held to create a trade deal between the two markets. The negotiations, however, are not that straightforward as both parties are having different opinions. Most recent suggestion from the EU part is the level playing field agreement. Level playing field consist of proposals on few main parts.

Environment, taxation, labour and social protection, and competition are the key parts of the suggestion. However, UK has been replying that they will not want to be part of the European Union laws or regulations anymore as they have departed the union. (Fleming 2020.)

Regulatory challenges are evident in the UK as well many laws and regulations are done in accordance to European Union, however, now after 40 years UK needs to set the regulations without slowing the financial system. As well in the case of crisis, the responsibility of financial stability would be only in the UK without the help of EU (Fleming & Young 2016, 3).

Governmental negotiations that are conducted at the moment however affects other entities as well than just the financial institutions. So far UK has been able to succeed in international labour force and students by having transparent immigration rules. However, as mentioned before, problems may occur if this immigration will be restricted due to the new agreements between UK and EU. (Driving Forces of the Cluster Formation n.d.)

Budget deficit has been also creating challenges for the cluster and in the competitiveness report, macroeconomic environment was characterized the weakest of all factors. Therefore, because of the high government debt and budget deficit, London also faces challenges if the government needs to start decreasing these factors in a way that affects the financial institutions. (Porumbiou et al. 2017, 7.)

4.6 Chance

London financial cluster as well as the other cluster and countries around the world are prone to effects caused by chance. Chance can consist of disasters, epidemics, pandemics, terrorist attacks and other events that cannot be controlled. Several terrorist attacks have taken place in London in the past decade and has therefore been a threat to everyone living in the city. (Terror in the UK: Timeline of attacks 2020.) As well in 2008, UK also suffered from the financial crisis that started from the collapse of the global financial services company, Lehman Brothers (The financial crisis - 10 years on 2018). Financial crisis hit UK severely and as Economic & Social

Research Council described, “Over that period hundreds of thousands of businesses shut down and more than a million people lost their jobs.” 2008 financial crisis was additionally the reason for the increased government debt that still causes challenges for the UK. (The Global Financial Crisis 2020.)

The most current challenge however for the cluster is the Covid-19 virus that spread out to be a pandemic in the global scale. London stock exchange has been facing fierce challenges as, by far, stocks has already fall to the same level as in the 2008 financial crisis. Therefore, resulting over 270 billion pounds worth of loss to the London top 100 companies. These effects have been forcing UK and London based companies to cope with the stock crash in ways that may harm the financial stability of the cluster, for example by taking more debt. (Weatherby 2020.) The London Stock Exchange (LSE) faced a significant hit as the stock crashed in March 2020 (see Figure 14). It is yet unclear how the situation is going to resolve but currently it is taking a hard toll on the economic world. UK therefore needs to be able to answer to the Brexit and global health crisis at the same time.

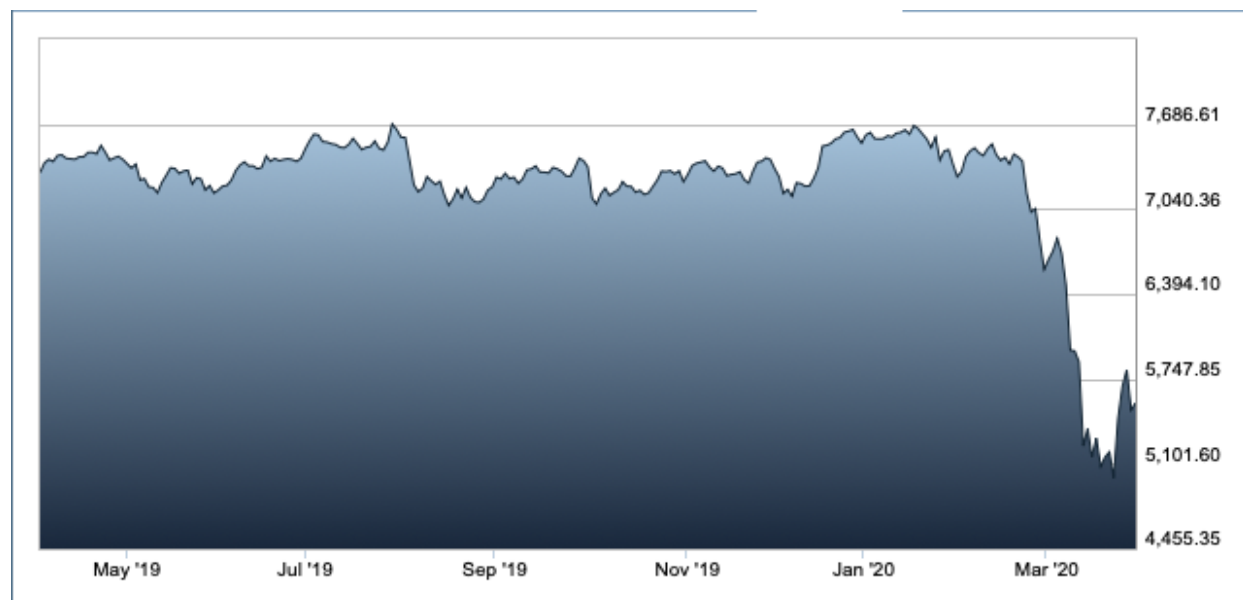


Figure 15. The development of the largest 100 companies (FTSE 100) in the London Stock Exchange in the past year. (London Stock Exchange 2020)

5 Discussion

The research was conducted in order to locate the challenges affecting London financial cluster currently while considering possible solutions to overcome these issues. The research was carried out by using Porter's diamond model as a theoretical framework. Many of the studies already existing were done by considering the financial cluster overall or the possible strengths of the cluster. Previous studies also highlighted the way of how the London financial cluster created its dominance in a global scale while disregarding the possible difficulties that it may confront. Therefore, it created an opportunity to find competitiveness challenges that the global financial capital needs to consider while looking forward.

5.1 Answers to the research question

The study consisted of two main research questions, what are the current competitiveness challenges of the London financial cluster and how to overcome these challenges. This chapter discusses the main results found from the study.

2016 was the year of the voting whether to stay or leave the European Union in the UK. This started a chain reaction of problems affecting the competitiveness. After the year 2017, financial jobs have been decreasing each year that has therefore a direct effect on the attractiveness of the financial cluster (Enver 2019). The decrease in jobs is explained by the companies moving abroad and to different cities in UK (Parry 2019, 180). When considering capital in the cluster, the importance of the EU countries for the UK financial services trade is massive and UK has now been able to rely on this big market. However, this also indicates that significant restructuring needs to be made if the trade deal is not well established. (The foreign exchange and over-the-counter interest rate derivatives market in the United Kingdom 2019.) The new trade deal is also vital for the survival of many companies creating the infrastructure in the area and if the trade diminishes between UK and EU, many of the companies affected by the financial transactions will be under a risk (Cox & Jones 2007, 63.). Increased amount of fiscal pressure as well has been a significant challenge for the financial institutions and global crisis such as financial crisis and climate change will increase it even more (London: A Global Marketplace for

Infrastructure Solutions 2020). To overcome these issues, it was suggested in the interviews to expand the businesses to other countries in the EU to keep the connection to the European market. As well new infrastructure planning needs to be made to cope with the changing needs and new needs that will appear (London: A Global Marketplace for Infrastructure Solutions 2020.).

When considering the customers of the cluster, the market has been decreased significantly as the EU is no longer a second home market for the UK and London. The current home market does not consist a good enough talent pool that is needed. International competition is fierce and therefore talent pool needs to be acquired from elsewhere. (Porumbiou et al. 2017, 19-20). As revealed from the interviews, suggestions for this consist from the same as many other issues that the cluster confronts. Expansion to the other countries would be a way to create a new connection to international talent pool and market, as size of the home market is harder to enlarge.

Brain drain from the clusters related and supporting industries is inevitable if the cluster is not able to create demand for the services (Porumbiou et al. 2017, 10-11.). Mutual market access is crucial for the competitiveness of the cluster and also for the law firms currently working in the cluster (Ferreira 2018, 5-12.). Competition from the rival clusters and from disruptive technology is evident and will challenge the competitiveness (The Global Fintech Index 2020). Interviews explained that overcoming these challenges demand a good trade deal between UK and EU. Additionally, the cooperation with the other clusters inside the country would create strong base for the international competition.

Rivalry comes from the large financial centres around the world, New York, Hong Kong, Singapore and Shanghai. Competition is evident in all the fields of finance but the current trend in fintech creates challenges as well. (The Global Fintech Index 2020, 30.) Asian rivals compete also with their lenient tax and juridical systems and therefore attracts international companies (Porumbiou et al. 2017, 9.). Interviews explained that collaborations with universities, students and EU countries have been seen as a way to overcome these issues as they will retain the attractiveness of the cluster.

Governmental challenges have mainly been created by the UK exit from the European Union. Currently it is considered that a successful trade deal is the best option to overcome the challenges in this. (Fleming 2020.) As interviewees reminded, chance altogether is impossible to predict but a good proactive measure needs to be considered in the cluster.

5.2 Practical implications

The findings of the study show how the competitiveness can be facing challenges even in the most successful financial clusters. Inability to cope with the challenges could create a decrease in the cluster's competitiveness. Current studies of the cluster were mostly related to the dominance of the cluster. Even though London has had the ability to retain its position as the financial capital of the world for decades, it now faces difficulties. This topic should be studied more often by the cluster itself to find ways to cope with these challenges and possibly predict them. These findings suggest several actions to be taken in order to prevent these challenges harming the cluster.

The findings show that uncertainty is currently the biggest challenge for the cluster if the current state of the Covid-19 virus is not included. Brexit is a major factor creating the uncertainty as trade deal and mutual market process is yet to be determined. Therefore, regardless of the Brexit developments, it is important for the cluster to start creating more diverse connections to the EU market. There is a possibility of complete reform in the financial clusters around the world after Brexit. "Do not put all eggs in the same basket" idea seems to fit the clustering as well. Therefore, the ability to gain connections to future financial clusters is important by creating new related and supporting clusters.

Focus also needs to be shifted towards new talents, hence, the students. Talent pool however cannot rely solely to the students in UK, but international students as well. To retain the competitiveness, connections to universities around the world are vital. Findings also showed that just an opportunity to study in London does not guarantee that the talent pool will stay in the cluster. Instead, the job opportunities need to be

offered for the students to maintain the attractiveness of the cluster. Eventually, if the trade deal is unsuccessful, creating offices to other European clusters enables London financial cluster keep the talents in the cluster companies. These actions would additionally decrease the problem of brain drain to international rivals.

As fintech increases its market share and importance globally in financial clusters, London needs to be able to create investments to that field. Even though the current state of fintech in the cluster is globally significant, the competition will increase in the upcoming years. USA is one of the biggest rivals and it has an advantage compared to London by having multiple fintech cluster around the country. These clusters therefore can benefit each other and together increase the level of innovation. New York, the biggest rival, will benefit from these home market innovations.

Globalization and digitalization are two megatrends that have been affecting the world for decades. However, London and UK now face a challenge from resigning from the EU. Unsuccessful agreement between UK and EU can be considered to be an act against the globalization and therefore harming the competitiveness of the country and their biggest cluster, finance. It can be considered an act against as there are cutting bonds with one of the biggest markets in the world. Well-crafted agreement on the other hand may decrease this risk. Increasing digitalization also creates a pressure for the cluster to increase the investments towards fintech. Consequently, adjusting to these two megatrends needs to be kept in mind while creating solutions to their overall challenges, highlighted in the results chapter.

5.3 Assessment of the results in the light of literature

As Michael Porter studied (1990), competitive advantage relies on first-class institutions that are evident in the cluster. London financial cluster is home of many world-known institutions as evident in the Appendix 2. However, these institutions are the one facing challenges at the current moment. In the previous study Porter suggested that globalisation does not decrease the importance of the home market. According to this research, in a way London financial cluster lost a second home market as UK decided to resign from the EU. London and UK overall had mutually

beneficial trade deal in the past as they were part of the union but now that deal is under a reconsideration and therefore creates uncertainty to the near future. Additionally, as the study showed, wealth management customers are mostly local agreeing with Porter's theory.

Porter (1990) also emphasized the government's role mostly as a catalyst rather than source of competition. This study agrees with this hypothesis even though governmental issues are at the heart of London's development after Brexit. Additionally, as Porter explained, cooperation between government and industries can be beneficial. Hence, if a good trade deal is done, it will be beneficial for the London financial cluster as business can continue relatively same. To simplify even more, a good trade deal does offer a beneficial environment for the cluster, but it does not create competitiveness directly, that is eventually in the hands of the companies and institutions.

Porter's diamond model was effectively used in this study but regarding to a limited amount of data restricted when analysing internal competition. However according to Porter (1990), effective use of diamond model as a whole contribute also to the international competition. The author however considers that as digitalisation has decreased the distance in financial services, for example ability to buy stocks at any time from any market, and therefore makes it equally important to focus also to external rivals. Afterall, these external rivals are not needed to be geographically close anymore as they were in the time of Porter's study.

5.4 Limitations of the research

The research was affected by the limitation that it faced. The researcher however used well known sources to maintain the reliability and validity of the research. Data was therefore gathered from trustworthy sources such as Insurance Information Institute, City of London, Bank of England, Stockholm School of Economics, London Review of Education and so forth. These sources were selected while keeping mind their reputation. Interviews were conducted by using the same principles. Interviewees were professionals from the financial field and had information from

the international situation in finance. However, interviewees were not working in the cluster which therefore limited the research. This ultimately limited the primary data as direct connection to the cluster was not available. To increase the reliability and validity of the study, interviewees from the cluster would have been found useful. As the researcher faced limitation in the primary data, the amount the secondary data was increased in the study.

After carefully introducing himself to the related literature the researcher decided to apply Porter's Diamond Model as the theoretical framework. This particular framework was chosen because of its suitability for the cluster competitiveness study. Regarding to the framework, the author however faced challenges. Considering the chapter related on context of strategy and rivalry, different approach needed to be taken. Originally the framework suggested focusing on internal rivalry but as the study moved forward, author decided to focus on the external rivalry. This decision was made based on the importance of the topic as well as the limited information regarding internal rivalry.

Regarding generalizability of the results, the author does not consider the results to be generalizable to any extent. This is because the results are based on the area specific data and therefore can and will vary between different clusters around the world. The competitiveness analysed in the study is highly affected current country specific challenges. Additionally, the primary data gathered in the research was considered to be specific for the current state concerning the cluster. Ultimately whether same sort of study is conducted in other cluster the results would be possibly different as the challenges vary around the world. The author therefore considers this study to solely offer data about current challenges affecting the London financial cluster.

As the topic was relatively new and some of the challenges mentioned in the study are yet to be resolved, the author used news-based sources as a secondary data. Sources as The Guardian, Independent, The New York Times, Reuters and Standard among other were used in the study. These news sources however are considered to be trustworthy but some of the sources may have a tendency to be politically either left or right. The author therefore used multiple different secondary news sources to balance the political affect that might be involved.

Additionally, in the primary data, to decrease the errors that may occur from the results the author introduced himself well to the subject before conducting the interviews. Limitations in the level of information could also arise from the data gathered but triangulation was hence used to decrease the possibility of misinformation.

The study was also conducted in a way that the topic of Brexit was yet to be developed and this ultimately created challenges. The author needed to be highly aware of the EU resignation that was underway at the time of the study.

5.5 Recommendations for the future research

Currently Brexit negotiations are underway, and these offer the best opportunity to limit the harm caused by the resignation. Beneficial trade deal and mutual market access between EU and UK can offer a possibility for both parties to benefit. However unsuccessful trade deal creates increasing level of uncertainty in the cluster and country. This subject would be beneficial to be studied in the future as the negotiations progress. These results would therefore benefit the cluster in order to understand where to invest resources. Additionally, investors would benefit from this study by understanding how the cluster is able to develop or maintain its competitiveness.

Brain drain is evident whether the unsuccessful trade deal happens and hence the cooperation between local universities and international universities is increasing its importance. Study about the cooperation possibilities would offer beneficial information about the current state and possibly even encourage more cooperation.

In addition to increasing investments towards fintech could provide efficiency in the global competition especially with the USA. Increasing investment to fintech clusters around UK could benefit London financial cluster by creating cooperative clusters to support. Therefore, important resource topic would be to do a comparative study between London financial cluster and for example New York financial cluster. This study would explain differences in these two clusters and compare the pace of economic development in these centres. Comparative study would additionally showcase development areas that could be further studied in the future.

However, many of these research recommendations needs to be considered more as the negotiation proceed but future studies are important for the cluster. Current studies conducted rely more on the cluster's growth to its prominence than its challenges and therefore new researches concerning challenges are needed. As a recommendation for the future research, would be better access to primary data from the cluster. Then the access to challenges considered by the cluster itself would give insight from that perspective. The questions what happens to the competitiveness after the Brexit? What financial measures London financial cluster needs to do in order to increase its growth after political turbulence? How could the cluster create value for international talent to arrive to the cluster? These are questions that needs to be resolved in the future. Considering these topics would, in the authors opinion, offer great benefit for the cluster itself and for international and local investors.

References

- Abraham, J. 1994. Is Competitiveness Dangerous Obsession in the Financial World? In Fair, D. E. & Raymond, R. J. 2013. The competitiveness of financial institutions and centres in Europe. *Financial and Monetary Policy Studies*. Springer Science & Business Media: Dublin.
- Akpinar, M., Can, Ö & Mermercioglu, M. 2017. Assessing the sources of competitiveness of the US states. *Competitiveness Review: An International Business Journal*, 27 (2), 161-178.
- Akpinar, M., Can, Ö & Mermercioglu, M. 2015. Determinants of competitiveness in European regions: A test of the emerald model. *Competitiveness Review: An International Business Journal*, 27 (2), 114-130.
- Alberti, F. G. & Giusti, J. D. 2012. Cultural heritage, tourism and regional competitiveness: The motor valley cluster. *City, Culture and Society*, 3, 261-273.
- Allen, K., Brown, A., Friedman, J., Nudelman, S., O'Brien, P. 2007. UK Competitiveness and the International Financial Services Cluster in London. Harvard Business School. 4 May 2007. Accessed on 12 February 2020. Retrieved from https://www.isc.hbs.edu/resources/courses/moc-course-at-harvard/Documents/pdf/student-projects/UK-London_InternationalFinancialServicesCluster_2007.pdf
- Bagan, I. & Dogan, I. 2012. Competitiveness of the industries based on the porter's diamond model: An empirical study. *Irrjas*, 11 (3), 441-455.
- Bardalai, A. 2019. *Key Facts about the UK as an international financial centre 2019*. TheCityUK. Accessed on 23 March 2020. Retrieved from <https://www.thecityuk.com/assets/2019/Report-PDFs/38f8518200/Key-facts-about-the-UK-as-an-international-financial-centre-2019.pdf>
- Baxter, P., Jack, S. 2008. Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*. 13 (4), 544-559.
- Berger, T. 2008. Concepts of national competitiveness. *Journal of International Business and Economy*. 9 (1), 91-111.

- Creswell, J. W. 2007. *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. 3rd ed. Thousand Oaks: Sage Publications, Inc.
- Chan-Lau, J.A., Mitra, S., Ong, L.L. 2007. Contagion Risk in the International Banking System and Implications for London as a Global Financial Centre. *International monetary fund*. IMF Working Paper. April 2007.
- Chapman, B. 2019. *Brexit: £1 trillion of assets and 7,000 banking jobs moved from UK to EU so far, research finds*. The Independent. 26 June 2019. Accessed on 17 January 2019. Retrieved from <https://www.independent.co.uk/news/business/news/brexit-city-of-london-jobs-financial-services-banking-impact-a8975711.html>
- Chapman, B. 2020. *New York surges ahead of London as world's top finance hub as Brexit undermines confidence*. The Independent. 27 January 2020. Accessed on 5 February 2020. Retrieved from <https://www.independent.co.uk/news/business/news/new-york-london-brexit-financial-services-centre-survey-a9304521.html>
- Cho, D., Moon, H. & Kim, M. 2008. Does one size fit all? A dual double diamond approach to country-specific advantages. *Asian Business and Management*, 8 (1), 83-102.
- City of London jobs are growing steadily*. 2019. City of London. March 2019. Accessed on 17 January 2019. Retrieved from <https://www.cityoflondon.gov.uk/business/economic-research-and-information/Documents/city-statistics-briefing.pdf>
- Colantone, I & Stanig, P. Global competition and Brexit. *American political science review*. Working Paper, 2016-44.
- Cox, P. & Jones, L. 2007. The Competitive Impact of London's Financial Market Infrastructure. City of London. Accessed on 23 March 2020. Retrieved from <https://bourse-consult.com/wp-content/uploads/2014/03/The-Competitive-Impact-of-Londons-Financial-Market-Infrastructure1.pdf>
- Creswell, J. W. 2007. *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. 2nd ed. Thousand Oaks: Sage Publications, Inc.

- Davies, M. B. & Hughes N. 2014. *Doing a Successful Research Project: Using Qualitative or Quantitative Methods*. London: Red Globe Press.
- Delgado, M.,Ketels, C.,Porter, M. E. & Stern, S. 2012. The determinants of national competitiveness. *National bureau of economic research*. Working Paper, 18249, 2-47.
- Driving Forces of the Cluster Formation*. Ebrary 2014-2020. Accessed on 23 March 2020. Retrieved from https://ebrary.net/21301/management/driving_forces_cluster_formation
- Doolan, D. M., Winters, J., & Nouredini, S. 2017. Answering research questions using an existing data set. *Medical Research Archives*, 5 (9), 1–14.
- Dorfman, M. 2019. *BREXIT AND LLOYD'S OF LONDON*. Insurance Information Institute. Accessed on 8 April 2020. Retrieved from <https://www.iii.org/insuranceindustryblog/brexit-and-lloyds-of-london/>
- Eichengreen, B. 2019. *What's the future of the city of London?* World Economic Forum, 19 February 2019. Accessed on 20 January 2020. Retrieved from <https://www.weforum.org/agenda/2019/02/a-survival-kit-for-the-city-of-london>
- Enver, H. 2019. *Summer 2019 London Employment Monitor: City jobs dramatically decline as other sectors recover*. Morgan McKinley, 7 July 2019. Accessed on 12 March 2020. Retrieved from <https://www.morganmckinley.co.uk/article/summer-2019-london-employment-monitor-city-jobs-dramatically-decline-other-sectors-recover>
- Fernando, I. N. & Long, W. 2012. New conceptual model on cluster competitiveness: A new paradigm for tourism? *International Journal of Business and Management*, 7 (9), 75-84.
- Ferreira, J. M. & Estevao, C. M. S. 2009. Regional competitiveness of a tourism cluster: A conceptual model proposal. *Encontros Científicos - Tourism & Management Studies*, 5, 37-51.
- Ferreira, J. 2018. The effect of Brexit on legal services. *Legal and Constitutional Affairs*. 1-15.

- Fleming, A. *Brexit: EU drafts trade deal ahead of talks with UK*. BBC News 13 March 2020. Accessed on 30 March 2020. Retrieved from <https://www.bbc.com/news/uk-politics-51871155>
- Fleming, E., Young, D. W. 2016. *The impact of 'Brexit' on the financial services sector*. GrantThornton 2016. Accessed on 26 March 2020. Retrieved from <https://www.grantthornton.co.uk/globalassets/1.-member-firms/united-kingdom/pdf/brexit-impact-financial-services.pdf>
- Frankfurt Financial Cluster* 2017. Stockholm School of Economics. Accessed on 8 April 2020. Retrieved from <http://www.louisbachelier.org/wp-content/uploads/2017/10/sse-frankfurt-finance-cluster.pdf>
- Hall, S. & Beaverstock, J. V. 2012. Competing for Talent: Global Mobility, Immigration and the City of London's Labour Market. *Cambridge Journal of Regions Economy and Society*, 5, (2), 271-287.
- Hilton, A. 2018. *Anthony Hilton: Brexit decline threatens the City's talent for survival*. Standard, 25 September 2018. Accessed on 26 October 2019. Retrieved from <https://www.standard.co.uk/business/anthony-hilton-brexit-decline-threatens-city-s-talent-for-survival-a3945251.html>
- Hox, J. J., Boeije, H. R. 2005. Data Collection, Primary vs. Secondary. *Encyclopedia of Social Measurement*, 1, 593-599.
- Inman, P. 2019. *One in three UK firms plan for Brexit relocation, IoD says*. The Guardian, 1 February 2019. Accessed on 20 January 2020. Retrieved from <https://www.theguardian.com/politics/2019/feb/01/one-three-uk-firms-activate-plans-move-operations-abroad-no-deal-brexit-iod-survey>
- Jin, P. & Moon, H. 2006. The diamond approach to the competitiveness of Korea's apparel industry: Michael Porter and beyond. *Journal of Fashion Marketing and Management*, 10 (2), 195-208.
- Jones, H. 2019. *UK watchdog's handling of world's top derivatives market gets EU red card*. Reuters 17 October 2019. Accessed on 17 March 2020. Retrieved from <https://www.reuters.com/article/us-eu-markets-derivatives/uk-watchdogs-handling-of-worlds-top-derivatives-market-gets-eu-red-card-idUSKBN1WW1W1>

- Ketels, C. 2016. Review of competitiveness frameworks. *Irish National Competitiveness Council*, 1-55.
- Kitson, M., Martin, R. & Tyler, P. 2004. Regional competitiveness: An elusive yet key concept? *Regional Studies*, 38 (9), 991-999.
- Krugman, P. 1994. Competitiveness: A dangerous obsession. *Foreign Affairs*, 73 (2), 28-44.
- Kuah, A. T. H. 2002. Cluster theory and practice: Advantages for the small business locating in a vibrant cluster. *Journal of Research in Marketing and Entrepreneurship*, 4 (3), 206-228.
- Leinbach, T. R., Kennard, A., Ho, R., Windstedt, R. O. 2020. Britannica 23 March 2020. Accessed on 27 March 2020. Retrieved from <https://www.britannica.com/place/Singapore>
- Leung, C-K. 2020. Hong Kong administrative region, China. Britannica 29 January 2020. Accessed on 27 March 2020. Retrieved from <https://www.britannica.com/place/Hong-Kong>
- Lines, T. & Monypenny, R. 2006. Industrial clustering. *Industrial Clustering, Proceedings Sustainable Economic Growth for Regional Australia National Conference SEGRA*, 1-13.
- London: A Global Marketplace For Infrastructure Solutions*. 2020. City of London. Accessed on 23 March 2020. Retrieved from <https://www.cityoflondon.gov.uk/business/support-promotion-and-advice/promoting-the-city-in-the-uk/Documents/infrastructure-report.pdf>
- London population 2020*. 2020. Population UK. Accessed on 29 January 2020. Retrieved from <http://www.ukpopulation.org/london-population/>
- London population*. 2020. World population review. 15 May 2019. Accessed on 17 January 2020. Retrieved from <http://worldpopulationreview.com/world-cities/london-population/>

- London Stock Exchange. 2020. LSE webpage. Accessed on 1 April 2020. Retrieved from <https://www.londonstockexchange.com/exchange/prices-and-markets/stocks/indices/summary/summary-indices.html?index=UKX>
- Lundequist, R. & Power, D. 2002. Putting porter into practice? practices of regional cluster building: Evidence from sweden. *European Planning Studies*, 10 (6), 686-704.
- McRae, H. & Cairncross, F. 2018. *Capital City, London as a financial centre*. London, New York: Routledge.
- Makortoff, K. 2018. *London to lose €800bn to Frankfurt as banks prepare for Brexit*. The Guardian, 29 November 2018. Accessed on 20 January 2020. Retrieved from <https://www.theguardian.com/politics/2018/nov/29/london-to-lose-800bn-to-frankfurt-as-banks-prepare-for-brexit>
- Martin, R., Kitson, M. & Tyler, P., 2006. *Regional competitiveness*. London and New York: Routledge.
- Maskell, P. & Malmberg, A. 1995. Localised learning and industrial competitiveness. *Cambridge journal of economics*, 23 (2), 167-185.
- Moon, H. C., Rugman, A. M. & Verbeke, A. 1998. A generalized double diamond approach to the global competitiveness of korea and singapore. *International Business Review*, 7, 135-150.
- Mukher, S. 2020. *Financial Infrastructure and Economic Growth*. Economic discussion. Accessed on 23 March 2020. Retrieved from <http://www.economicdiscussion.net/economic-growth/financial-infrastructure-and-economic-growth/11057>
- Nallari, R. & Griffith, B., 2013. *Clusters of competitiveness*. Washington: The World Bank.
- Parry, D. 2019. The challenges facing English schools in the journey to 2030, with a specific focus on London. *London Review of Education*, 17 (2), 178-192.
- Porter, M.E. 1990. *The Competitive Advantage of Nations*. TheFree Press: New York
- Porter, M. E. 1993. Competitive advantage of nations. *Harvard Business Review*, March-April 1993 issue, 73-93.

Porter, M. E. 1998. Clusters and the new economics of competition. *Harvard Business Review*, November-December 1998 issue, 77-90.

Porter, M. E. 2000. Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14 (1), 15-34.

Porter, M. E. 2008. *On competition*. Boston: Harvard business school publishing corporation.

Porter, M. E. 2016. Defining clusters of related industries. *Journal of economic geography*, 16 (1), 1-10.

Porter, M. E., Delgado, M., Ketels, C., Stern, S. 2016. Moving to a new global competitiveness index. World Economic Forum. Accessed on 10 December 2019.

Retrieved

from <https://www.cepal.org/ilpes/noticias/paginas/2/40352/FundamentosIndices.pdf>

Porumboiu, C., Balaceanu, C-E., Dobrescu, M., Cutuca, A. 2017. City of London – A Financial Services Cluster Analysis. *CCREI Working Paper Series*. 8, 3-28.

Reve, T. & Sasson, A. 2015. Theoretical and methodological advances in cluster research. *Competitiveness Review*. 25 (5), 524-539.

Riasi, A. 2015. Competitive advantages of shadow banking industry: An analysis using porter diamond model. *Business Management and Strategy*, 6 (2), 15-27.

Rosenfeld, S. 1997. Bringing business clusters into the mainstream of economic development. *European Planning Studies*, 5 (1), 3-23.

Rugman, A. M. & D'Cruz, J. R. 1993. The "double diamond" model of international competitiveness: *Management International Review*, 33 (2), 1-23.

Salah-I-Martin, X., Blanke, J., Hanouz, M. D., Geiger, T., Mia, I., Puaa, F. 2008. The global competitiveness index: Measuring the productive potential of nations. World Economic Forum. Accessed on 10 December. Retrieved

from https://pdfs.semanticscholar.org/2f04/6a3215f2a7f07ec98d67d063e752bb34284d.pdf?_ga=2.111763203.647011431.1576078908-1498524960.1576078908.

Sassen, S. 1999. Global financial centers. *Foreign affairs*. 78 (1), 75-87.

Sasson, A. 2011. Knowledge-based health. April 2011. BI Norwegian Business School, Department of Strategy and Logistics. <https://biopen.bi.no/bitstream/handle/11250/94222/2011-04-Sasson.pdf?sequence=1&isAllowed=y>

Sasson, A., & Reve, T. 2012. Competitiveness as industrial attractiveness: Operationalizing the emerald model. Microeconomics of Competitiveness Research Workshop, Harvard Business School.

Saunders, M., Lewis, P. & Thornhill A. 2009. *Research methods for business students*. 5th ed. Harlow: Prentice Hall.

Schwab, K. & Porter, M.E. 2008. The Global Competitiveness Report 2008-2009. World Economic Forum. Accessed on the 8 December 2019. Retrieved from http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2008-09.pdf

Schwab, K. 2018. The Global Competitiveness Report 2018. World Economic Forum. Accessed on 8 December 2019. Retrieved from <http://reports.weforum.org/global-competitiveness-report-2018/the-global-competitiveness-report-2018/>

Schwab, K. 2019. The Global Competitiveness Report 2019. World Economic Forum. Accessed on 8 December 2019. Retrieved from http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf.

Silverman, D. 2015. *Interpreting Qualitative Data*. 5th. ed., Rev. ed. London: Sage Publications, Inc.

Smith, A. J. 2010. The competitive advantage of nations: Is porter's diamond framework a new theory that explains the international competitiveness of countries? *Southern African Business Review*, 14 (1), 105-130.

Steinberg, J., Clark, S., Patrick, M. 2019. *What the U.K. Election Result Means for London's Future as a Financial Hub*. The Wall Street Journal. 13 December 2019. Accessed on 21 January 2020. Retrieved from <https://www.wsj.com/articles/what-the-u-k-election-result-means-for-londons-future-as-a-financial-hub-11576245175>.

Taylor, P., Beaverstock, J., Cook, G., Pandit, N. 2003. *Financial Services Clustering and its significance for London*. Corporation of London. Accessed on 8 April 2020.

Retrieved from <http://ethicalfinancehub.org/wp-content/uploads/2017/12/Financial-Services-Clustering-and-its-significance-for-London-publishedreport-2013.pdf>

Terror in the UK: Timeline of attacks. 2020. Sky News 2 February 2020. Accessed on 31 March 2020. Retrieved from <https://news.sky.com/story/terror-in-the-uk-timeline-of-attacks-11833061>

The Baltic Exchange is a Foundation member of Maritime London. 2020. Maritime London, 9 January 2020. Accessed on 12 February 2020. Retrieved from <https://www.maritimelondon.com/member/the-baltic-exchange>

The financial crisis - 10 years on. 2018. Bank of England. Accessed on 31 March 2020. Retrieved from <https://spark.adobe.com/page/DAIRb7HdWiHqA/>

The foreign exchange and over-the-counter interest rate derivatives market in the United Kingdom. 2019. Bank of England, 2019. Accessed on 17 March 2020. Retrieved from <https://www.bankofengland.co.uk/quarterly-bulletin/2019/2019-q4/the-foreign-exchange-and-over-the-counter-interest-rate-derivatives-market-in-the-uk>

The Global Financial Crisis. 2020. Economic & Social Research Council. Accessed on 31 March 2020. Retrieved from <https://esrc.ukri.org/public-engagement/social-science-for-schools/resources/the-global-financial-crisis/>

TOP 20 Biggest Stock Exchanges in the World – Largest Stock Exchanges by Market Capitalization. 2019. The Robust Trader. Accessed on 17 March 2020. Retrieved from <https://therobusttrader.com/top-20-biggest-stock-exchanges-in-the-world-largest-stock-exchanges-by-market-capitalization/>

Trang, A., Goldstein, M. 2019. *For Wall Street Banks in London, It's Moving Time.* The New York Times, 17 February 2019. Accessed on 20 January 2020. Retrieved from <https://www.nytimes.com/2019/02/17/business/brexit-banks-wall-street-london.html>

U.K. Population 2020. *Worldometer.* 17 January 2020. Accessed on 17 January 2020. Retrieved from <https://www.worldometers.info/world-population/uk-population/>

Weatherby, B. 2020. *London Stock Exchange has worst week since 2008 financial crash*. Evening Standard 13 March 2020. Accessed on 31 March 2020. Retrieved from <https://www.standard.co.uk/news/uk/london-stock-exchange-financial-markets-ftse-100-a4387176.html>

What is Lloyd's? 2020. Lloyd's of London website. 2020. Accessed on 12 February 2020. Retrieved from <https://www.lloyds.com>

World city populations 2020. World population review webpage. Accessed on 10 March 2020. Retrieved from <https://worldpopulationreview.com/world-cities/>

Yeandle, M., Wardle, M. 2019. *The Global Financial Centres Index 26*. LongFinance. Accessed on 27 March 2020. Retrieved from https://www.longfinance.net/media/documents/GFCI_26_Report_v1.0.pdf

Appendices

Appendix 1

Interview questionnaire

1. What kind of challenges do you see affecting the competitiveness of the London financial cluster?
2. What is the level of technology utilized in the financial cluster?
3. In what ways could FinTech challenge the competitiveness of the cluster? How to overcome these issues?
4. How do you see the quality of the human resources in the cluster? Are there any challenges?
5. How could the cluster overcome these issues?
6. What do you consider to be the level of knowledge resources, such as universities, R&D and market knowledge and are there any challenges for the cluster?
7. How could these areas be developed to increase the competitiveness?
8. What kind of challenges are there in the financial infrastructure, such as institutions, technologies and financial intermediaries?
9. How would the development of the infrastructure increase the competitiveness?
10. Who are the customers of the cluster and to what extent are they national, to what extent international? How demanding are the national customers?
11. Which are the main suppliers to the financial cluster and what other industries are closely related to the financial cluster?
12. How do suppliers and related industries contribute to the competitiveness of the financial cluster? and are there any challenges?
13. How could these challenges be mitigated?
14. What is the level of competition in the London financial cluster?
15. What type of disadvantages are arising from the competition?

16. How does the attitude of London, towards international business contribute to its competitiveness? Are there any challenges?

Appendix 2. London Financial Cluster Map (Allen et al. 2007, 18)

