

# 1 Question 1

## **Why is location an important factor in the geography of finance?**

If money, in all its forms, is indispensable to the modern economy since "...permits the separation of sales and production in space and time" (Harvey 1999, p.245), why study the geography of finance? While one could assume that modern telecommunications and information technology infrastructure would make finance aspatial and footloose when compared to other sectors of the economy such as natural resource extraction or manufacturing, the empirical evidence from many lines of evidence, including but not limited to (Code 1983; Code 1991; Green and Meyer 1992; Green 1993; Meyer 2007; Gong and Keenan 2012; Green, O'Hagan, and Lefebvre 2015) show that financial institutions are primarily an urban phenomenon.

As per (Dixon and Monk 2014), world financial assets amount to just under 100 trillion USD. This represents a very large claim against productive output as resumed in GDP, and tying such vast sums into geographic space could be used to help prepare regulators and other stakeholders to anticipate shocks to these sums of money, lest one becomes the next Iceland, Ireland, Cyprus... where the size of the financial shock was too large for the state to properly handle.

A less catastrophic use of this information for the state, would be to further knowledge of the finance sector, its location in physical space, as well as the associated jobs that it sustains. These jobs are an important source of quaternary sector employment, which offers higher than average wages compared the 'average' job in the economy. As such, it's important for the government to understand these jobs in order to protect a valuable tax resource. To quote from the Roman Emperor Tiberius (42 BC – 37 AD) via Suetonius: "It is the part of a good shepherd to shear, not flay, his sheep." (Thomson 2006)

Lastly, understanding the locational preferences of large financial firms can help these large firms better choose a headquarters/regional headquarters location, as can be seen in the saga of UBS's buyer's remorse over its move of 55km from Manhattan financial district to the low land costs of Stamford Connecticut (Bagli 2011). Furthermore, when explaining the disadvantages of the new suburban location, the company admits to having difficulty recruiting top-tier talent, as well as wanting to be closer to po-

tential clients despite having a tailor made and cutting edge building and infrastructure.

## 2 Question 2

**Are there circumstances in which agglomeration economies advantage might be overstated or perhaps even illusionary? In answering, provide at least one example.**

Agglomeration economies consists of processes that take advantage of economies of scale and network effects. Furthermore, these processes operate on two important levels, that of the individual firm and that of the region. However, it would be fallacious to believe that the net effect of agglomeration are always tangible or beneficial.

Economies of scale are frequently at the forefront of economics literature (Panzar and Willig 1977) with regards to firm-level competitiveness. It should be noted that when drawn schematically in an idealized model, the cost curve is u shaped: costs decrease as production increases and once optimal conditions are surpassed, costs increase. Financial commentations such Yves Smith have stipulated that despite the perennial promesses of synergy driven by the elimination of duplication of effort during bank mergers, the empirical evidence shows that the costs of managing large banks have diminishing returns when banks pass 25 billion dollars in yearly revenue (Smith 2010).

As it currently stands, there is no formal model for the spreading of tacit knowledge in an economic cluster. While it might be a true that knowledge spreads via the “old boy’s network” during time away from work and between employers, much of this literature pertains to the experience of information technology professionals located in California’s Silicone Valley as well as the film industry in Hollywood. This popular phenomenon might not be true in different cultural backgrounds such as the Cambridge information technology cluster, where there is very little off-the-clock fraternization between employees that have moved on to other employers due to long work hours and the social climate is more restrained, and thus there is less ‘shop-talk’ and thus transmission of best practises between employers.

On a regional scale, it is possible for agglomeration clusters to adversely affect broader economic conditions even though the clustering activity is

profitable for the firms in the cluster. For example, Cecchetti and Kharroubi (2012) observes that the size of a country's financial sector is correlated with GDP growth only up to a point, and that over-sized financial sectors are a drag on economic growth. This finding is explored in further detail in Cecchetti and Kharroubi (2015), and this working paper finds that large finance industries crowded-out other sectors of the economy, and this crowding out offers a mechanism for explaining the lower overall economic growth seen in the 2013 paper.

Similarly, agglomerations can lose their competitive edge with their competition when scarcity of skilled labour raises wages above the level of competitiveness. Furthermore, Huber (2012) finds that this phenomenon is especially hurtful to smaller companies in a cluster, for they have less resources to offer higher compensation when compared to larger firms.

How do we tally the cost of environmental degradation? A classic example is the UK's industrial midlands and the City of London. This area industrialized via classical Marshallian districts saw wealth and prosperity being generated on a scale unseen until then in human history, however, the benefits were allocated in a haphazard fashion and many of the lower strata of the population did suffer the effects of pollution, such as poor air quality due to coal combustion products, unsafe working environments leading to deaths and maiming on the job, such that 40% of the volunteers for the Boer War (1899-1902) were deemed medically unfit for service<sup>1</sup> (Hall 2002).

### 3 Question 3

**This question has the following parts: (1) Describe, explain and discuss “Spatialization” based on Fabrikant, Skupin et al.; (2) Next, provide a hypothetical for now, but as good-as-you-can-make-it, example of Spatialization using some of the data for your study. Which of your data variables (pp. 14-15 in your Proposal) can be used? Pay attention to the X and Y axis, ensuring they make sense and have a clear label. State what these labels are; (3) What Distance Modeling could be applied to your**

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<sup>1</sup>Incidentally, this was a major impetus for the turn of the century public health movement, and also was a foundational plank in David Lloyd George's push for post-WWI public health policy (Hall 2002)

example? (Cf. Chapter 6 on Distance Relationships by Chrisman); (4) Given ‘Investment DistanceSheds’ generated in (3) in non-spatial ‘financial spaces’, what Surface Modeling can be applied? (Cf. Chapter 8 on Spatial Analysis using Continuous Fields by Burrough et al); (5) What results can be expected from using this type of approach? Comment on this three-part ‘Surface Analysis of Distance Models derived from Spatialization of Investment Data’ approach.

### **3.1**

Spatialization is the use of geographic principles and techniques to examine non-geographic data (Skupin and Fabrikant 2003). The use of geographic metaphors is intended to help the researcher find insights in otherwise inaccessible high-dimensional data by transforming the data into “map-like” cartographic space (Skupin and Fabrikant 2008). This approach draws from Tobler’s First Law of Geography (Tobler 1970), and readers of the cartographic data can

### **3.2**

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